

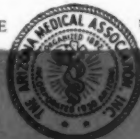
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Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

Volume 17



NUMBER 10

OCTOBER, 1960

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MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

October, 1960



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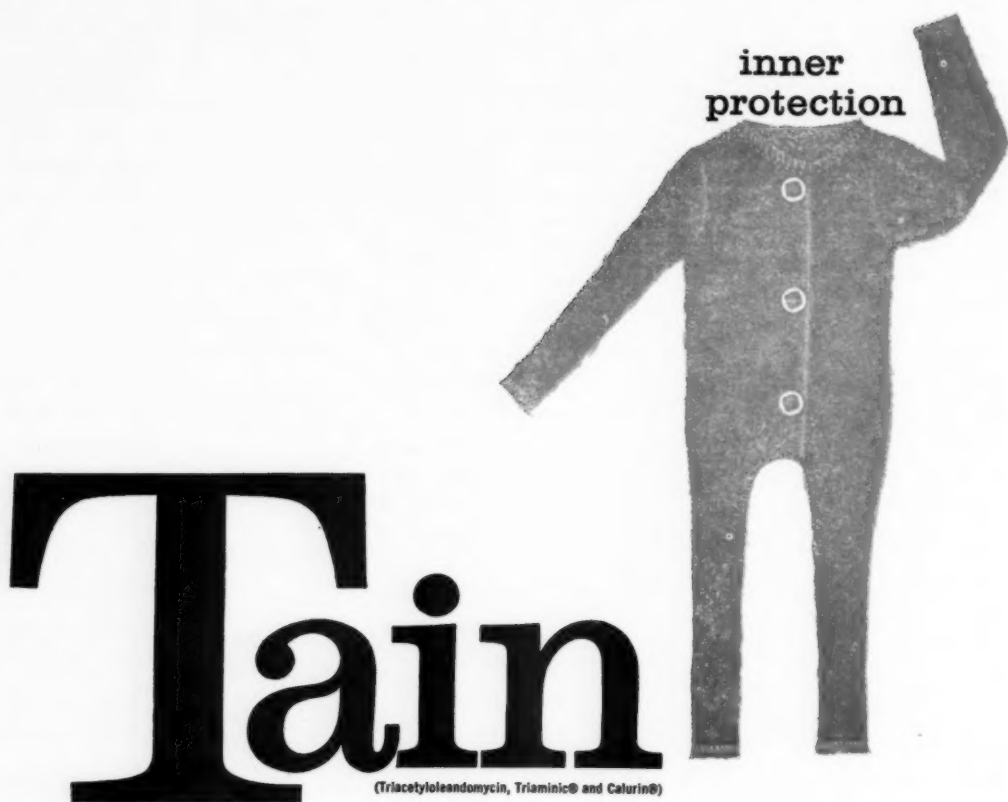
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Vol. 17, No. 10



October, 1960

Present Day Management Of Hypertension*

Robert W. Wilkins, M.D.

Past President of American Heart Association,
Professor and Chairman of the Department of Medicine,
Boston University School of Medicine

IT MIGHT be well to spend a good portion of our time today going over some of the background of the management of patients with hypertension before we launch into a discussion of the use of specific drugs, because it seems to me that much of what we're doing — certainly much of what we have done in the past — is subject to change, and that drugs may come and drugs may go, while hypertension is probably here to stay. At least that is my philosophy. I don't think we are going to get rid of hypertension as a clinical problem any more than we're going to get rid of peptic ulcer or colitis or a number of other chronic diseases to which people for some reason seem to be predisposed. And, therefore, if you will bear

with me, I thought I would take you over some of the philosophical background concerning the etiology and the pathogenesis of this disease, relating this, however, purely to clinical patients, and having nothing to do specifically with animal or other experimental studies.

Let me give you one way of classifying arterial hypertension from the standpoint of etiology. Now as you know, we have essential hypertension, and renal, adrenal, and neurogenic hypertension, coarctation of the aorta, and toxemia of pregnancy. There may be some other rarer forms. But whenever we see a patient whose blood pressure has been found elevated — and usually this is how the patient comes to me, that is, somebody, an insurance examiner, an army doctor or local physician has revealed that the patient has an elevated blood pressure — these things flash through my mind. Some of

*Presented at the Third Annual Cardiac Symposium sponsored by the Arizona Heart Association at Phoenix, Arizona on January 29 and 30, 1960.

Editorial note: The Spanish translation of this article will appear in the November 1960 issue.

them may be rather readily dismissed — as for example, coarctation of the aorta. Certainly hypertension of toxemia of pregnancy doesn't have to be considered except in half the population, and in that half, only if they are pregnant.

Now "essential hypertension" is a sort of catch-all, not a satisfactory way to make a diagnosis, but it is what's left when you eliminate the other causes. So let's talk about these other causes for a moment. We are becoming increasingly impressed with the frequency of renal disease as an antecedent or accompanying phenomenon in patients with hypertension. This is most usually bilateral, and in our experience it is in the form of pyelonephritis, an extremely common disease if one makes every effort to diagnose it by going to the extent that some of our renal experts are doing now, such as taking biopsies. Unfortunately it is not frequently unilateral — I say unfortunately it is not, because until recently, and this of course, is also subject to change, we felt we could *cure* patients with unilateral renal hypertension through surgery. You may detect a note of doubt in my mind as to whether they should all be subjected to surgery, and I hope to come back to that later. In adrenal hypertension we have, of course, pheochromocytomas, which are relatively easy to diagnose, provided you think of the diagnosis, and especially if you take the trouble to do one or more 24-hour urine samples for the excretion of catecholamines. Primary aldosteronism formerly was easy to diagnose, or at least to suspect; but then we began to use diuretics in hypertension which "loused up" for us the easy way of diagnosing hyperaldosteronism, namely by a low serum potassium which tipped us off frequently that a patient might have this disease. Now we have to resort to more difficult techniques; we certainly would stop the diuretics and repeat the potassium determination, but it may take several weeks for the potassium then to swing back up into the normal range. The Cushing syndrome is fairly familiar to us all now that we're seeing it produced iatrogenically with steroids. The term adrenogenital syndrome does not refer to children — I know nothing about pediatric endocrinology — but to an adult state, usually in women, where there is virilism with diffuse hyperplasia of the adrenals, and hypertension as one of the manifestations; this is not usually difficult to spot

once you think of the diagnosis. Rarer forms of neurogenic hypertension such as those that occur through the Cushing mechanism — the same Cushing, but not the same disease — through increased intracranial pressure, such as with a brain tumor. We occasionally see acute hypertension as a manifestation of poliomyelitis, occasionally with tabes or other myelopathies in the cord, and occasionally with polyneuritis. Pain, if present, makes these probably not purely neurogenic, but partly psychoneurogenic. Hypertension of coarctation of the aorta is familiar to you all, and we won't dwell on toxemia of pregnancy although it is an extremely interesting type of hypertension.

Now what do you do about a given hypertensive once these thoughts have flowed through your mind, in order to try and find out what you're dealing with? Well, there are some routine studies that always should be done, and then there are some special studies that may be done. Certainly the blood pressure should be taken in both arms, and if there's any suspicion that coarctation is present, pressure should be taken also in the legs, and it should be taken lying and standing, as well as sitting. We feel that the standing blood pressure, if it shows postural hypotension, may tip you off that something other than essential hypertension is present, because in essential hypertension the blood pressure generally *rises* (both systolic and diastolic) in the upright position, and certainly the diastolic usually rises. Therefore, in a patient who has postural hypotension, and by that I mean he has a falling diastolic pressure in the upright position, one suspects that this is *not* essential hypertension. A decreased intensity and delayed appearance of the lower pulses, especially in the femorals, of course, is related to coarctation of the aorta. The routine blood studies, particularly with emphasis on serum potassium, serum sodium, and blood-urea nitrogen or N.P.N., are very important in giving a prognostic evaluation as well as a diagnosis of a patient with essential hypertension or any other hypertension. We're now also interested, and I will tell you why tomorrow when we talk about cholesterol and anticholesterolemic agents, in taking blood total cholesterol in hypertensives. Of course, one does the albumin, sugar and so on in the urine, but our best clinical test, we feel, for renal function, even if the urea-nitrogen

is normal, is the fractional P.S.P. excretion test. We feel that this test should be done carefully, that is, the patient should first be hydrated in order to get the urine flow up, the dye should then be given, all the urine produced in the first 15 minutes after the dye should be put into one container — *all* of it and *exactly* at the end of the fifteen minutes. Now this does not mean that the patient has to void before you give the dye, it simply means that at exactly 15 minutes after the dye, he has to void and empty the bladder completely. Many patients think you just want a sample of urine. Of course, as you know, that will not do. This is a clearance method, and the first 15-minute urine should contain for normality at least 25% of the injected dye. If less than 15% is excreted by the kidneys in the first 15 minutes, you will usually find that the blood-urea nitrogen is on the borderline or definitely elevated, and both are definitely bad prognostic signs. Now we go ahead and complete the P.S.P. test by taking the half hour, hour and two hour specimens. The value of that mainly is to show you that the test was done properly, since the great majority of the dye should appear the first 15 minutes, and if you get a result from the laboratory such as first 15 minutes 10%, second 15 minutes 35%, then you know something got mixed up — your specimens got mixed up or the patient didn't empty the bladder at the end of the first 15 minutes and it also tells you that since there was 50% of the dye out in the first 30 minutes, the renal function isn't as bad as the first 15-minute specimen would indicate. I always spend a little extra time explaining the P.S.P. test to the patient because if properly done — and it can be done easily in the office—I think it's the most valuable of all the simple renal function studies.

Excretory pyelograms are very useful, and Dr. Meilman has pointed out recently that these are done best, or better, by taking a film at three minutes from the time of the completion of the injection of the radiopaque material whatever it may be, because you may find that there is a *delay* in excretion of the dye in one kidney so that the pyelogram may not appear first on the bad side; though just to foul you up, it may, when it does appear, say in five or six or eight minutes, be much more concentrated on the *bad* side and therefore, your inclination would

be to say that the bad side is the good side. You won't make this mistake if you take an earlier excretory pyelogram and Dr. Meilman thinks that three minutes is about the optimum time for this first film. If the dye has definitely appeared on one side and not on the other, then this is suspicious of a retarded, or deficient blood flow on that side, even though when it does appear later it may appear more concentrated on the opposite side. As you know, when there is an obstruction to blood flow through one kidney that kidney may concentrate the urine very highly — this is the basis of the so-called Howard test. I won't go into that any further. Chest film and fluoroscopy are mainly to rule out congestive failure and to get an estimate of cardiac size — electrocardiogram is for the same reason mentioned last.

Now there is another way that these patients should be classified, and that is on the basis of their course and prognosis, because after all, a pretty good dictum in hypertension is that it will continue to do what it has been doing, at least without any sudden change, unless you have the appearance of the malignant state. A patient who has been getting along well for the past five years with a known blood pressure and has still the same blood pressure will probably do about as well during the next year, barring an accident. Now accidents *can* happen, and I'm thinking of cerebral vascular accidents and coronary accidents, but barring those, or the onset of the accelerated or malignant phase, you can usually tell what hypertension is going to do by what it has been doing.

Most of the cases fall into what we used to call "benign" — we're trying not to call them "benign" anymore, because they do cut 20 years off the life expectancy, reducing life expectancy from about 72 to 52 in untreated patients. But the course is usually long — a 20 year course, and always more than ten years on the average — unless it goes into the accelerated phase which partly at least is associated with a retention of salt and water. Many times we feel that the accelerated phase is kicked off by either one of two mechanisms or both in combination: one, the onset of subclinical congestive failure; two, some severe psychiatric or psychological stress or strain with emotional anxiety or feelings of neglect.

Now a second way that we can classify hypertensive cases is by what we see in the repeated examinations that we have made. We may have a completely uncomplicated hypertensive — a woman, 34, a little overweight, blood pressure 190 over 110, eye grounds even may look normal — nothing to go with it except the elevated blood pressure. Frequently, however, there is a family history as I will stress, but more often, especially if the disease has been present more than a few years, complications appear, which can be picked up in the fundi, in the heart, aorta and main branches, brain or kidneys. These are the vulnerable areas, and the fundi give us some estimate of what's going on in the brain. Therefore, we're careful to grade the eye grounds. Heart size is important as I've already mentioned, as is the electrocardiogram for left ventricular strain pattern, etc. The renal function I don't wish to overstress, except that it is such an important prognostic sign in treatment and during treatment, because if you have a patient who develops renal failure and nitrogen retention, it is usually bad news no matter what you do, although you should still try, as I will show you later.

Now to run through what we do know about the pathogenesis of this disease from the standpoint of some of these factors. We know that the kidneys are important, and undoubtedly, renal disease is primary in some of them as I've already said, but it's doubtful if renal disease is primary in most patients with essential hypertension. When we are sure it's "essential" we don't call hypertension renal, but what do we call it until we discover that it is renal? We must call it "essential"; and we have many cases now in whom we have changed the diagnosis from the standpoint of pathogenesis from "essential" to "renal." For my money clinically there's no way really to tell them apart unless you go after the renal component by careful studies of the types that I've mentioned. But it's doubtful that most patients with essential hypertension do have primary organic renal disease, because hundreds — literally thousands — of renal biopsies were taken by Dr. Smithwick and other surgeons who were doing sympathectomies, and the renal tissue in these cases was normal in many of the patients, and minimal in most of them until fairly late in the course. So it's very difficult for me to believe that organic renal disease sets off most essential hypertension.

Now many people have projected that some renal malfunction or dysfunction is responsible, such as an excessive neurogenic response to stress or strain, or, as Dr. Smithwick feels, a hyper-reaction to the upright position — you remember I said the diastolic pressure tends to rise when the essential hypertensive stands up. Whether it is emotional, postural, or a combination of all these stress factors, we don't know, but it seems that renal vasa constriction may occur as a neurogenic response to an excessive degree in many patients with essential hypertension. This would result in a decrease in the renal blood flow and an increase in the filtration fraction. Eventually there is also a structural change appearing in the kidneys that the pathologists call nephrosclerosis, and this is mostly seen in the arterioles and small arteries as thickening. I'm not talking about the type that you get in malignant hypertension — namely, the necrotizing arteriolitis with an inflammatory component. What I'm talking about is a structurally visible thickening of the arteries and arterioles, which also seems to be attended by reductions in renal blood flow and increases in filtration fraction.

Now as to neurogenic or psychogenic factors, whatever we should call this component, I am convinced in my own mind that the typical familial hypertensive is an apprehensive, anxious person who reacts more. You remember that Mrs. Gumbridge "felt" things more in *David Copperfield*. Such people react more. I'm not sure they actually feel things more, they say they do, they say the cold test, for example, is so cold that they simply cannot stand it, and maybe that's true — certainly on the cold test they do have an extraordinary hyper-reactivity of the blood pressure. If you put one of their hands in ice water, hypertensives as a group will raise their blood pressures much more than normotensives. However if you put these people to bed, as the rule, within a week their blood pressures will come down, and many times will come down to normal. I believe that these really are hypertensives — although there are those who will say that they're not really hypertensives. Well, that has to be your own decision. I believe they're hypertensives, because many times they have all the other signs, — or symptoms and signs of hypertension, such as enlargement of the heart, eye ground changes, reduced renal blood flow of the type I've been talking about. Yet on bed rest frequently these

people's blood pressures will come to normal. If you potentiate that bed rest by sedation (heavy sedation as with sodium amytal) they will do this acutely, overnight. Now that is important from the standpoint of therapy. In other words, it is a good prognostic sign for the use of hypotensive therapy, if during bed rest, or a sedation test, the blood pressure comes down essentially to normal. Contrariwise if the pressure won't come down on rest, reinforced with heavy sedation with sodium amytal, then it is a bad prognostic sign for the use of drugs, though not necessarily hopeless. I feel good when I look at the sedation test and see the blood pressure has come down, let's say to 130 over 90 or 80 during the night while the patient is asleep. You know, the Russians are very much interested in whether essential hypertension isn't really a conditioned reflex — they are very inclined to worship Pavlov and his theories — and they have done some interesting studies in that regard which would tend to support this theory. I don't have time to go into them in any further detail here.

It is true that many hypertensives even with the type of superficial psychotherapy that I am able to give — this is certainly not analysis or anything like that — do tend to moderate their blood pressures. One of the main uses of the tranquilizing drugs, such as reserpine, is that it does this much easier for me and much more certainly; and believe me, with much less outlay of my own time and emotional effort than trying to do it solely with "psychotherapy." Many psychiatrists can reassure patients, and when they do the patient's pressure comes down. I've told my wife that *my* psychotherapy means draining off my own emotional stores of security into the patient, and that when it's over the patient feels good and I feel as bad as the patient did when he walked in. Be that as it may, this is one of the measures that may be helpful in the management of hypertensive patients, and certainly I am happy to admit that the total management therapy-wise of a patient must include psychotherapy of the type that I think any doctor can give; it is mainly reassurance, they apparently need it, and I think it's our duty to give it to them. I always potentiate it, if you will, with judicious doses of one of the tranquilizing drugs.

Now what then can we say about the family

factor in essential hypertension? There have been a number of studies, and I shall cite only a few, which to me make it perfectly obvious that hypertension or a tendency thereto is a familial trait. This disease does run in families, there's no question about it. It may not be the same trait as the arteriosclerotic trait. Certainly the news seems particularly bad when you have both traits in an individual, but I am convinced that hypertension is a familial disease. It develops like diabetes in many patients, relatively late in the patient's life, but if you will take a careful family history in essential hypertension, it is almost always positive. Dr. Longcope at Hopkins said, "Don't ever say 'always' in medicine, and never say 'never' in medicine." Just as sure as you do somebody will say, "Well I had a case."

We have Ayman's studies in children, and he took seven hundred and eighty children whose parents and grandparents, incidentally, he had studied very carefully. He also has done this in twins, identical twins, and so on, and even in some triplets. I won't take you through all that, but simply will say that of 32 children whose parents had definitely normal blood pressure, only one had what he regarded for a child as the upper limit, the very upper limit, of normal. If that isn't very significant, the next figure is. Of 55 children whose parents *had* marked hypertension, 25 (none of these children was older than twelve) had blood pressures greater than 150 over 90. He concludes that hypertension is a hereditary disease. Now I've dodged that term "hereditary" by calling the disease "familial." I say that a child is born not only of the family but also *to* the family, and that he picks up the family traits and behavior patterns. But I think that Ayman feels that essential hypertension is definitely a Mendelian hereditary trait.

Platt in England tackled this in a different way. Of hypertensive patients with a positive family history, six out of the seven on complete study (six out of seven — there were more than seven — but six out of seven proportionately) had essential hypertension. Now of those hypertensive patients who had a completely negative family history for hypertension, three out of four definitely had some other disease than essential hypertension. Or take his cases of unilateral renal disease proven by every method to be

present in only one kidney. Of course we are all prone to fall into the error of believing that if a patient has unilateral disease and hypertension, then the hypertension must be due to the unilateral disease, because we know it *can* be. Platt however shows us that that isn't necessarily so, at least on a treatment basis. Of 23 patients who had unilateral renal disease — only one of eleven with a positive family history was relieved by taking out that bad kidney — only one of 11, less than 10%, *versus* eight of twelve who *were* relieved but had a negative family history. It is therefore of great practical importance that you should question your patient on this point; namely, does *anybody* in his family have high blood pressure? Did his mother have any trouble when she was pregnant? Did his father have a stroke? Are his grandparents still living, or at what age did they die? Now if they died at age 85, all four grandparents, and his parents are still living, then the familial factor, even if he has a trait for hypertension, isn't a very serious one, because the total family history takes precedence.

Now what are we thinking of along the line of treatment? What justification, what possible justification is there for merely, as some of our opponents in this field put it, making *yourself* feel better when you see the blood pressure come down, by the use of drugs? Well, we believe from such data as I've given you and much other that is available that there is a familial trait, and perhaps it's a truly hereditary gene towards excessive hypertensive responses to stress. Dr. Caroline Thomas has shown this to be true in the medical students at Hopkins. Anything she had the "familial hypertensive" students do, such as take an examination, merely stand up, or walk around — the "prehypertensive" students whose family have hypertension as a definite finding — caused them to hyper-react, that is, their pulse rates went up more, and their blood pressures went up more. Thus, they reacted more through the cardiovascular system. I think it's not inconceivable that there are many "breeds of cats" around, some hyper-react to stress through their gastrointestinal systems either with excess production of acid or with diarrhea, while hypertensives hyper-react to stress through their cardiovascular systems. In that excessive reaction there may be central and autonomic nervous system participation,

renal participation and endocrine participation, of which I've already spoken. Perhaps under stress the endocrines really do (as many people believe) pour out more corticoids in hypertensive individuals, or more of whatever produces hypertension, than they do in normotensive individuals. Certainly, sooner or later vascular disease gets established. I have told you some reasons for my believing that this vascular disease is usually secondary, not primary. Which ever it is, finally vascular disease, especially in the kidney, begins to contribute to the establishment, the aggravation and perpetuation of a vicious circle. Once a patient has renal vascular disease in the small renal arteries or in the large renal arteries, he has a self-perpetuating mechanism; this is well proven in animal experiments.

Under these various mechanisms, there is a gradual establishment of a higher base level for the homeostatic protection of blood pressure. A normal person protects his blood pressure at 120 over 80. Hypertensives are not "set" at 120 over 80, they are set at a higher level, and they will react just as violently as a normal person when their pressure goes lower than its setting, to get it back up. (They will also react if the pressure goes higher than its setting, to get it back down.) It seems as if the "barostat" in these hypertensive people is somehow set higher; as you would set the thermostat in your house higher, so that the heat comes on and goes off depending upon the setting and nothing else. At least this is an attractive hypothesis and there is much clinical evidence in support of it.

Now hypertension, whatever it is due to, remains reversible or "physiologic" until gross vascular disease, especially in the kidneys, becomes well established. "Reversible" simply means the ability gradually to re-establish lower barostatic settings, or lower "acceptable" and "accepted" levels of blood pressure in a hypertensive individual. That's what I mean by "reversible" — that the blood pressure *will* go down, and the patient will suffer no ill consequences; he doesn't collapse, he doesn't feel weak, he doesn't faint, he doesn't seem to have ischemia anywhere.

The main categories of drugs for hypertension include the tranquilizers such as the Rauwolfia drugs; Veratrum, which still has some use in older patients; Hydralazine or Apresoline; the Chlorothiazide group of diuretics; and the

blockers — and we should not speak of “ganglionic blockers” now because we are getting new blockers that don’t block ganglia but block only adrenergic responses. I’ll tell you about them later, and simply say now that we think they are better than the ganglionic blockers. However, on the blood pressure they have the same effect — they block the adrenergic impulses and they do cause postural hypotension. Fortunately they don’t cause constipation, bladder dysfunction, eye dysfunction, which are all dependent on cholinergic responses, because the cholinergic responses are *not* blocked by the adrenergic blockers. We’ll come back to that later.

People say, how do you pick your cases for treatment? Well, you don’t. You just try it out on them; but you ought to have some idea in your mind as to what is a favorable case, because many times the patient or his family wants to know. Doctors as a group tend to forget that one of their very important functions is making a prognosis. A patient can accept the fact that he is ill, but he would also like to know, “What’s the outlook; how am I going to do?” He’s entitled to know this, if *you* know it, and the only way you can know it is by amassing experience. For example, if he has severe organic vascular disease in the kidney, with uremia, then it’s bad news for a hypertensive, and the greater the uremia and the poorer the renal function, the worse the news is, no matter what you may do. Now you *can* lower the blood pressure in many of these patients, but as soon as you do that the uremia gets worse, apparently because they need an elevated blood pressure to get the blood through the kidney and filter out the nitrogenous wastes. So you are frustrated, and there’s nothing more frustrating than to be in a therapeutic corner where you cannot move out; when anything you do seems to make the patient worse and you have to leave him alone except to give minor symptomatic drugs. The second great area where vascular disease is bad news, but not to be compared with the renal area, is the cardiac. Patients can have enormous hearts, can even have bad coronaries, which is a much worse factor than enlargement, and still do quite well, if you can really take the load off the heart by lowering the blood pressure, and provided, in the coronary cases, that you can slow the pulse rate in the bargain.

Third, cerebrovascular impairment is a very

grave clinical sign, but prognostically not nearly so serious, because you must assume that with treatment you’re going to lower the pressure and tend to lessen the danger of strokes which in many hypertensive patients are hemorrhages, not thromboses. Certainly cerebrovascular disease puts urgency on the case for treatment, but it doesn’t have nearly the poor prognostic significance that renal insufficiency has. Fourth, severe retinopathy usually goes along with renal disease and cerebrovascular disease, and we used to think it was a pretty bad sign to have papilledema: one year of life was the prognosis. This is no longer true. We have many, many patients who have gone well over five years after having papilledema. This has been substantiated everywhere. Papilledema *per se* is a serious sign, and papilledema means that you should treat; but papilledema with good renal function, good cardiac function and nothing of importance in the central nervous system, is nothing to get terribly alarmed about today. You know that things are going to deteriorate rapidly if you don’t treat, but you *are* going to treat and hope to avoid the deterioration.

If the patient’s age is over 50, you feel two ways about it. He’s gotten to 50, and he’s a pretty well-established hypertensive, especially if his disease began during the 30’s. I don’t say it’s bad, I don’t say it’s good, but if the pressure is high and the patient is over 50, you’re a little restricted in the line of treatment. The vascular system has gotten adapted to the hypertension, organic vascular disease is already established and the reversibility is less. You treat not quite as urgently, although definitely.

Men, as the rule, do poorly with hypertension — women have it twice as often, but they do twice as well. Therefore, if the patient is a male, has a positive family history, and is obese (unless you know you can get that weight down, and I never know) these factors *per se* are bad prognostically. The level of the pressure, if you put your eye on the diastolic, is helpful, but if you put it on the systolic, it is not very helpful, especially in people over fifty, many of whom will have wide pulse pressures, such as 210 over 90 or 80. The latter, in my book, certainly is *not* hypertension. It is arteriosclerosis with a water-hammer pulse due to stiff pipes.

If the blood pressure refuses to fall, especially on bed rest and/or a sedation test, we don’t like

it prognostically. If you start off with a low pulse rate when there is no failure it is less favorable; or turn this around, if you start off with a *fast* pulse rate in a relatively well young woman, that is, only a tachycardia and a blood pressure 230 over 120 — it is favorable. I can usually get such a pressure down, especially if I can slow the pulse rate — (I think it's often a manifestation of anxiety) — and I lessen the anxiety with a tranquilizer coupled with a moderate vasodilator. Such young women usually do well; after all remember, they're women. Women often do well whatever *you do*. They certainly do better than men with the same degree of hypertension.

Now how do we know that *any* drug is any good? This is the question that comes up most often, and believe me, it is the most painfully difficult question to answer, because it takes so long. Hypertension is a very chronic disease. Nothing less than months of observation, or at least a few weeks, means anything significant in alterations of blood pressure. So you have to take a patient and put him on a placebo for 10 or 12 weeks. Then you put him on Rauwolfia for five or six weeks. Then you control that with an equally ("equally" you *hope*.) sedative dose of phenobarbital as a placebo. You then try substituting reserpine.

Nothing ever happens suddenly with an oral Rauwolfia derivative; it never did. Pulse rates tend to go down with them and to come up with phenobarbital. This evidence has to be slowly accumulated, and shows that Rauwolfia drugs are hypotensive — although not powerfully hypotensive unless they are given parenterally. I want to stress here that reserpine given parenterally is a very potent hypotensive drug, but by mouth it isn't — it's a slow acting, bradycardic, moderately hypotensive drug that causes nasal congestion. A patient can usually learn to tolerate the nasal stuffiness, especially in a climate like you have here. It is said to be due to vasodilatation of the turbinates. Vasoconstricting drops help it considerably.

Occasionally a patient on a Rauwolfia drug in the usual doses has bad dreams, a symptom of overdosage. These may be nightmares, sometimes fantastic dreams along with nasal congestion, and sleepiness in the daytime. In this case the dose should be omitted for a week, and then be resumed in one-half the previous amount, if at all.

Most of our cases are complicated. They're usually sent to us because some other doctor has said, "I'm not getting anywhere with therapy; will you take over?" For example, a "malignant," with grade four eye grounds, practically ready to convulse with encephalopathy, comes in. Here is where the very potent hypotensive effects of intramuscular reserpine in a $2\frac{1}{2}$ mg. to 5 mg. dose can be utilized. With it we give if necessary an intravenous blocking drug. The dose of the blocker must be very small in such cases — 5 and $2\frac{1}{2}$ mg. of hexamethonium, say, for remember that the encephalopathic patient is exquisitely sensitive to blockers. We don't use the blockers now as much as we used to. We're relying more on intramuscular reserpine, and if the patient is not able to take anything by mouth we can give parenteral Chlorothiazide to potentiate the reserpine. We want to get the pressure down quickly; that's the important thing in the encephalopathic patient. Later we shift over to oral doses, and then to chronic oral therapy, which is continued as necessary indefinitely.

I want now to mention the peripheral adrenergic blocking agents. Ciba, and Burroughs Wellcome have both brought out a new adrenergic blocking agent. Burroughs Wellcome's is called "Darenthin" and is available in England. It's also available here for experimental use. Ciba's drug is named "Ismelin," or Guanethidine. Now these drugs are exceedingly interesting. We think — perhaps it's because we've had more experience with it, that Ismelin, the Ciba drug, is easier to use. The dosage range is much narrower, whereas with the adrenergic blocker of Burroughs Wellcome — Darenthin — the dosage is more widespread such as you get with hexamethonium; it can vary 25 times in different patients and in the same patients. So we're not quite as happy about the dosage range of Darenthin as of Ismelin, but Darenthin does not have quite as much stimulating effect on the bowel. Both of these drugs are "sympatholytic" only. They do not block the parasympathetic cholinergic nerves, so you tend to get cholinergic *hyperactivity*, a little extra salivation for example. The most disturbing side effect is what the patient will tell you is diarrhea, but it is usually not diarrhea, at least not a watery diarrhea; it's rather a number of explosive stools a day instead of one, or maybe one every other day as previously. The patients usually get used to this on Is-

melin, and I don't think for many hypertensives that it's a bad thing. Many hypertensive patients pay a lot of attention to their bowels anyway, and an adrenergic blocker usually straightens out their constipation. Ismelin is a very useful agent, but it occupies the same position in our scale of values — in our system of giving drugs — as any blocker; it's the last thing to try. In my opinion, a blocker is the last thing to try, because it will at least cause postural hypotension. I'm sure you're going to hear very much more about these new adrenergic blockers, that's why I'm telling you about them even though they're not generally available now. I believe they will soon become available.

We think, now, that these two drugs are better than surgery for unilateral renal disease, or perhaps I should say this differently — better than surgery on one kidney which is the worse of two diseased kidneys. Formerly in such cases when we had two diseased kidneys, one practically normal and the other one practically useless we used to take out the relatively useless one. We are not doing this any more at this time. We are treating them with Ismelin and the patients seem to do just as well and perhaps even better than on nephrectomy. You know that the urologists have told us for a long time, "Don't take out a kidney except for urological reasons; don't take it out for hypertension, because you won't, statistically speaking, do too much good. So, unless it's clearly a useless kidney, leave it in." The second thing is, a kidney taken out is a kidney taken out, and you cannot put it back. Such people frequently need renal mass, so we no longer take out the worse, even the considerably worse, of two diseased kidneys. We leave them both in, and we're treating them successfully so far with the adrenergic blockers.

As to the use of diuretics: there is no question — believe me, I am trying not to be too dogmatic — but there is no question that Chlorothiazide, its derivatives and its related drugs gave us a strong new ally, a new tool, in the treatment of hypertensive patients with drugs. They potentiate the effects of all the other drugs, and very powerfully in some. They potentiate the blockers most powerfully. So what we do in the kinds of cases I was just telling you about, even when renal hypertension is an important component, is to put the patient first on Chlorothiazide, — that is, we don't put them on Ismelin first. Rather we wait and see if they need a

blocker, because any blocker, remember, introduces unpleasant blocking effects — such as postural hypotension. We also use Chlorothiazide to potentiate such a blocking drug. For Chlorothiazide is a very strong potentiator, but in about one-third of the cases it will produce a very good hypotensive effect alone. It is true that we don't usually give it alone. We usually give it in combination with other drugs, starting off with some of the milder ones, such as reserpine; especially if the pulse rate is rapid, we try to get the pulse rate down. If reserpine doesn't work, we may go to Apresoline or one of the other renal vasodilators. Incidentally, drugs are coming along so fast in this field now that it's impossible to keep up with them. We have some new drugs which we have wanted for a long time to substitute for Apresoline which certainly has some undesirable side effects. For example, it can produce angina — Apesoline usually races the heart. If you give reserpine and Veratrum in advance you tend to offset some of the racing, the tachycardia, caused by Apresoline. Our standard dose of Apresoline is 50 mg. four times a day, rarely more. Even in this dose, however, it can cause angina, and if it does, we stop it.

One of the most frequent questions that's asked me is, "Do you ever do a sympathectomy?" Well, Dr. Smithwick, who is in our hospital, was doing sympathectomies at the rate of one a day in 1948. With the introduction of the hypotensive drugs it began to fall off. In the past year he has done about 10. How did he happen to do those? Most of them were done during the course of an exploratory laparotomy in the renal-adrenal area in patients whom we could not seem to control, and were suspicious that the patient had either an adrenal tumor, or unilateral renal disease, or renal arterial obstruction, or something peculiar. So Dr. Smithwick explored and in his expert hands, nothing was found. At operation, since the sympathetic chains were exposed, he then did a limited splanchnicectomy. That certainly doesn't hurt a hypertensive patient. I am not convinced that it makes the patient very much easier to treat, but I am certain that it does not make him any harder to treat — that is a limited splanchnicectomy. Occasionally such a splanchnicectomy will work as a hypotensive procedure. In a few cases it's brilliantly satisfying, but this is so uncommon that I don't like to recommend it. But a failure after a splanchnicectomy can be turned into a

success, and Dr. Smithwick has had many such cases, by the mere addition of Chlorothiazide, in *small* doses — for example, 250 mg. a day. Some splachnicectomized patients will respond to only 62½ mg. a day of Chlorothiazide. That's a *quarter* of one tablet!

Now how do we begin to manage a patient on the background of this kind of information? What can we do with drugs? Well, there's no use kidding ourselves that we have got a *specific* drug in any of the hypotensive drugs, with the possible exception of Chlorothiazide. The reasoning there is this: Chlorothiazide does not cause hypotension in normal or normotensive individuals. To my knowledge it's the only one of the hypotensive drugs that doesn't do so. All the rest do lower blood pressure in normal people just as they do in hypertensive people. Chlorothiazide does not — is *not* hypotensive in normotensives. Then how does it work? A lot of people thought it worked by depleting salt from the body and by decreasing the blood volume. This has been disproven. It's now generally agreed that there is some other effect of these diuretics in the hypertensive, and only in the hypertensive. What it is, we really don't know. Salt has something to do with it. Certainly sodium can never be gotten out of the hypertensive argument any more than the kidney which handles the sodium can be gotten out. But we do *not* think that the mechanism of action of Chlorothiazide can be explained solely by its salt effects.

We believe that if you're going to use hypotensive drugs successfully you have to feel that reducing blood pressure is helpful. If you don't believe that, then in my opinion, you'll be using drugs needlessly merely to lower blood pressure. You have to have a basic philosophy about this. However, I don't believe that you can even *try* this for very long with an open mind and not be convinced that it is helpful, because of what your patients will tell you, if only from their subjective appraisal of their symptoms without knowing what their blood pressures are. Frequently they will say, "I didn't know I was feeling bad until I began to feel better." And the most common thing that women tell me is, "Doctor, I hope I haven't done wrong." "What is that?" "Well, I felt so good I just had to clean up the whole house. I hadn't cleaned that house for two or three years, and I'm afraid now that

my blood pressure is way up." Most frequently the blood pressure is not up at all, it's farther down, so that this is really symptomatic improvement. I believe that lessening of fatigue of incipient heart failure which lowering the blood pressure relieves is what helps them. But if you don't believe any of this, then don't use the drugs. Or, if you're going to use the drugs, use them only with an experimental attitude, to see if there's anything in it.

Certainly combinations of hypotensive drugs are more active than any one drug used alone. If you're going to be a purist and say, "I will use only this, or only that" you will not get nearly as good results as if you'd bend a little and say, "I'll use drug number two if number one doesn't work. I'll even add two or three drugs together, but I will try to drop out any drug if I can show that it is not really contributing anything." Many times you will be convinced that a drug does contribute something and that others don't contribute anything. Naturally you retain only those that contribute something.

Now you don't *cure* hypertensive patients with drugs because if you stop the drugs the blood pressure goes up again. In fact, with certain drugs, particularly the blockers and to a lesser extent the diuretics like Chlorothiazide, the blood pressure will *overshoot*, or go higher on stopping them, and this is a very dangerous thing in a touchy hypertensive. Most of the bad cerebral accidents that have occurred in hypertensive patients on strong antihypertensive treatment have occurred when it was stopped immediately, or within two or three days. Say a patient runs out of a blocker and has a cerebral accident. It has happened. So you should caution the patient, "Don't run out of your pills. Don't go away and forget them." (Or any other excuse they can think up to stop medication, and believe me they can think up plenty.)

Less treatment is necessary to hold the blood pressure down than to get it down, and this is one of the most reassuring things, philosophically, to me, and financially to the patient. These drugs are not given away, they cost plenty. And it helps the patient's morale to have to need less. One of the questions they will ask you is, "Do I have to take drugs forever?" It helps me and them to be able to say honestly, "No, not *all* of them, *forever*. Perhaps *something* forever, perhaps a *little* forever, unless we learn more than we know now. But we do know that if you will

keep your pressure down for at least a year, then you may be able to decrease the therapy."

Incidentally warm weather is synergistic with hypotensive drugs. So is a warm bath, or a fever. So you should tell your patient, "If you take a warm bath and you're on drugs, particularly on a blocker, don't stand up in the tub suddenly, you may wake up to find yourself with a gash on the back of your head." This has happened to patients who have fainted in the tub from suddenly standing up with blockers aboard, in a warm bath. Patients taking these drugs are very susceptible to postural hypotension. You can and you should decrease the medication, (we do always) in warm weather. We also watch out in the fall, around October, say, to see whether a little increase in dosage may or may not be necessary. Blockers are less used today than formerly, even including the new adrenergic blocking drugs, which may cut out a little niche for themselves in the management of the renal hypertensives, as I have said.

You and your patient must be persistent if you are to succeed with drug treatment. If you're going to give up easily, don't start at all, because this is a *chronic* management problem, and you must tell the patient that this is what he must expect. You must treat for a long time. Now when do you treat? You treat whenever *you* think that the patient is going to do badly if you don't treat. And that presupposes you know a lot about this patient — a lot more than just his blood pressure.

Finally as I tried to emphasize, each patient with hypertension is different. When a person, or a physician comes up and says, "I know a patient whose blood pressure is 190 over 114; how would you treat that patient?" I always answer, "Well that depends. It depends on the sex, the age, the duration, the family history, the course, the kidneys, the eye grounds, and unless I know these factors at least, I simply cannot say. I cannot judge by the blood pressure alone." "Do you treat the old lady who has a blood pressure of 210 over 80?" No, not for *hypertension*, I don't.

We *must* individualize each case and take time, take plenty of time, to study and evaluate the course. It helps you to know that a hypertensive keeps on doing pretty much what he's been doing. If he's been getting into congestive failure, he'll be getting into more congestive failure. You do have to treat symptomatically, and psychotherapeutically, if you will, to reduce ir-

ritations, to try to get a patient into a line of work or line of life that's a little less trying on him. Certainly I feel strongly that you should try hypotensive drugs, and if you haven't, I think the way to start is with some of the milder ones, like reserpine, watching out for slow accumulative effects — patients can get depressed on reserpine — but if you continue to bring the dosage down, and this may be to less than one-tenth of a mg. of reserpine a day, you can avoid unpleasant sedative effects and still retain some of the hypotensive effects. If you'll try it, I think you'll often be successful. But then if it doesn't work, retain it and add something to it. Combinations are always better. And finally if I have one admonition, it is this: if you're going to embark on this with a patient, you must do it with a determined attitude. You must say and mean it, "We're going to get your pressure down."

In conclusion I'd like to tell you about one patient. She illustrates all these points. Practically everything that you could do to a hypertensive, we've done to this one. She's a young woman. She had had toxemia of pregnancy with her last pregnancy, but she didn't really have a sustained blood pressure until she was about 44 when I saw her, just premenopausal. She had an extremely high blood pressure around 260 over 160, and her story was that since childhood when she had had a nasal injury, she had a great deal of trouble with her nose, and had practically been drinking quantities of one of the strong vasoconstrictor nose-drop preparations. Now, I don't know that that had anything to do with it — I don't think it did. It was probably a red herring. We brought her into the hospital and I began to treat her. Believe me, I treated her with every trick in the bag and I finally decided (and this is sometimes a good lead), "This patient just doesn't have essential hypertension." We looked very thoroughly for primary hyperaldosteronism, naturally for renal hypertension, and we couldn't find anything diagnostic. But we were suspicious enough that we subjected her to an exploratory laparotomy. Dr. Smithwick did it, and I have full confidence that if anybody could have found what was wrong at that time, he would have. He said the kidneys were both pulsating, the arteries were pulsating, he couldn't find anything wrong with the kidneys. The adrenals looked as normal as any adrenals he ever saw. There were no tumors anywhere. There was nothing obviously wrong with her. He there-

fore did a limited splanchnicectomy.

The woman was just as hard for me to treat afterwards as she was before the operation. She still did not respond to the ordinary combinations, in good doses. Now because we were doing some experimental studies with the new adrenergic blockers, I began to try them on her with more success, and she finally came back at my insistence (and I'll tell you why I insisted) into the hospital for studies. She had developed some intermittent claudication of one leg, and it was pretty clearly intermittent claudication in a *young* woman. On feeling of her pulses in her feet, Dr. Wright, I found that she didn't have any pulses in her feet. She had one good femoral pulse. This tipped me off that this woman, for some reason, had vascular disease — probably arteriosclerotic vascular disease — and I thought if she's got it in her legs, she may have it in her kidneys. Now remember that we had done a complete work up and that Dr. Smithwick had had the kidneys in his hands one year before. We did a new pyelogram and now one kidney was definitely smaller, and the other definitely bigger than it had been a year before when she'd been in the hospital. We then put her on Ismelin (I think Darenthin may have worked as well) in combination with the other drugs. She's now running a perfectly normal blood pressure. She has still got both her kidneys — one kidney is not functioning too well and it's smaller — and it probably has pyelonephritis. Her total renal function, however is good, exceptionally good.

Therefore we assume that she has a very good kidney on the good side, and we won't hesitate now to do a nephrectomy on the bad side if we cannot keep her pressure down with drugs.

Now what does this story tell you? If we had not persisted in that woman, I don't think we'd have ever gotten her pressure down. Nowadays we talk about the cases we fail in. This is a remarkable change in our psychology from five years ago when we loved to talk about the cases we succeeded in. "I had a case" — you know. Today it's, "I had a case who *didn't* respond, and what do you think we can do about that?" It's when you don't succeed, that you are excited; but don't give up — that's my point. You keep on trying because sooner or later you can find, even in these obscure cases, either a remediable cause or with an addition or change in therapy you can get a therapeutic success.

Finally, we sometimes get a success when we

don't change a thing or find a new thing. We just *persist*. We've had some patients that we have had on therapy for two years or three years, and there's been little real response. Then something has happened and over a relatively short span, the pressure has come down an impressive amount, say 30-40 mm., although maybe not to normal. We've even seen this occur in two steps — the pressure has come down and sat, let's say at 160 over 100. I have a patient well in mind in whom that occurred. And then there was another downward step and he became relatively normotensive. When I then stopped his drugs his pressure promptly rose.

I think that it is something, putting it in a crude analogy, like a tug of war. Here is a patient who has a familial trait towards hypertension in response to — call it what you will — stress, environment, life, whatever it is, he just tends to get hypertensive. We are pulling the other way. If we *don't* pull the other way something in his head, probably some barostatic mechanism, gets set too high. Then when we try to pull the pressure down, that barostatic mechanism throws in a number of counteracting homeostatic responses in an effort to get the pressure back up again.

I think it's just a matter of pulling and tugging until we can get his body to accept a lower, more normal pressure. Now this idea fits, you see, with the now universally agreed observation that the pressure will frequently stay down — sometimes even when we stop the therapy — and it will stay down for months. We don't think you should ever stop therapy *completely*. We think we should continue to counteract the familial trait. We have youngsters, young people, whom we are now carrying on little doses of Rauwolfia and that's all. Now the basis for that is this. They were young, they're still young — one boy was 18 when he started. But that's all we're doing for them, say 0.05 mg. of reserpine a day. Now I have "placeboed" this boy with blank pills enough to convince me that when I let him go for six months on placebos he tends to slowly edge up to 140, 150, 160, from a low normal level—from 105 to 110 over 65. On such doses as he is taking he has no symptoms. Maybe it's all folklore, maybe it's mesmerism. However, I think that it is the maintenance of a counteracting drug, counteracting an inherited tendency which is towards essential hypertension, which I still believe to be a bad disease. Thank you!

Some Psychiatric Aspects of General Medicine

Richard E. Duisberg, M.D.

Phoenix, Arizona

The point still exists that those who need it most cannot usually afford psychotherapy, and frequently the psychotherapy so applied is exchanging one pill for another. Yet psychotherapy, aimed at the 'causes' of psychogenic disabilities will be far less costly than prolonged palliation of symptoms and semi invalidism.

This article may foster some awareness of "office psychiatry for the non-psychiatrist." (R.E.D.)

MR. A. B. JONES, aged 38, visits Dr. C. D. Smith, presenting complaints of longstanding. Gastrointestinal difficulties have often plagued him. Frequently they have been associated with headaches. He is restless. Sleep is a problem. He awakens several times a night and in the morning he is still fatigued — exhausted, in fact. He looks wan, weary and worried. Loss of an occasional day or two at work jeopardizes the job he has held for 11 years.

He has consulted one or several doctors during the last five years, has been on special diets, has taken various medications, had some teeth extracted, been checked by an allergist, who has found numerous sensitivities. He has eliminated sea food, several cereals and vegetables. He has no appetite anyway and suffers from constipation too.

Examination reveals abdominal sensitivity.

The pulse is rapid. He is a bit emaciated. The hands are cold and there is a fine tremor.

Mr. Jones frankly admits he has "always" been a bit highstrung. He pleads for help, protests his anxiety to continue to work — and, at the same time his concern that he may be dropped — or have to quit — because the symptoms are so distressing, so disabling, so annoying, so impervious to past treatments.

Kindly old Dr. Smith gently inquires into his more personal problems, elicits that his wife is "wonderful," in fact works to augment the family income. If only he could feel better she could confine her activities to the home and children. His job adjustments are "fine". He likes his boss and his fellow employees. Well, yes, he was passed up on promotion recently, but it was his poor health that was responsible. In short, Mr. Jones' life adjustments are "flawless" except for

the stress and frustration of constant, recurrent health problems. He begs for help. He'll do anything — follow any prescribed routines — take any medication, and won't Dr. Smith please get him well — that's his only worry — to keep going — to obtain help for the constant interfering physical problems and disturbances that distract him from his devoted dedication to his job, his wife, his children. Maybe those new shots he has read about would be the answer?

Dr. Smith considers, and eliminates by reasonable checks and tests, all the possible organic diseases. He finds a bit of anemia, nothing more.

Appropriate and minimal medications and routines are prescribed to modify the more disturbing symptoms. To himself, Dr. Smith classifies the patient's troubles as neurotic. He provides a dose of reassurance, adds a tranquilizer, and becomes the patient's new supportive father figure.

This is excellent management, as far as it goes. It matters not whether Dr. Smith is aware of his father role. The patient, in all likelihood will get along — perhaps even a bit better — at least for a time. And Dr. Smith has lived up to his Hippocratic oath and to his conscience and has alleviated pain and suffering to a degree. Now he can return to the relief of the "really sick," from whom he is justly reluctant to withhold his efforts and ever insufficient time.

Yet, there is something missing, something seriously wrong here. If this patient had complained of a cough, would a cough remedy have been the proper treatment, if the cause of the symptom were tuberculosis or an early malignancy? Some years ago, when medicine and diagnosis were less scientific and specific, symptom relief was often all that could be offered. Causes were often obscure, often untreatable. Medicine was 90 per cent an "art." Now medicine is a "science." Yet many disorders even today have causes that cannot be eradicated or brought to heel by treatment. And in these, the doctor must content himself with the treatment and alleviation of the symptoms. But such superficial therapy is not to be condoned in treatable diseases, where the cause can be found and removed. It would be malpractice to prescribe calamine lotion for the rash of secondary lues.

Emotional disorders and symptoms have causes.

These are not as readily found as those of some physical illnesses. There is no way to X-ray the "mind" or do air studies on the superego. But psychiatric techniques often can succeed, not only in making a diagnosis, but in treating the causes (as well as the symptoms).

In the case of Mr. Jones, psychiatrically oriented inquiry and evaluation of the patient's responses (not merely his words) by Dr. Smith, or perhaps by a psychiatrist, might have uncovered some considerably crippling and painful psychic causes for his complaints. His wife worked, yes. She didn't complain, no. But she had grown cool, aloof, indifferent. She was a good mother — always attending the children — in fact, to the exclusion of their father. And at work — there too, he was just tolerated — often felt ignored. Of course, the patient doesn't see the implication of these reluctantly expressed admissions. He cannot admit to himself — not now — and perhaps not until some several hours of patient discussion have created empathy and confidence in his mentor, and have lessened his anxiety and panic over realizing his, to his ego and the world at large — unacceptable and terrifying sense of inadequacy and insecurity. But in this awful threat may lie one "cause" of his escape into symptom-consciousness, and a cause of his inept and pathetic struggle to get sympathy and approval through sickness and perhaps eventual invalidism, from a wife who is losing her illusions about his competence as a man.

There is a second flaw in Dr. Smith's evaluation of Mr. Jones. The tacit diagnosis of "neurosis" is equated, to a degree at least, in the good doctor's mind with "nothing wrong." This appraisal is a gross error. Mr. Jones' discomfort is, granted, not due to organic disease. His symptoms, though troublesome, do not spell physical disaster or doom. But "only" functional is an evasion of reality. For what more miserable, indeed frightening and devastating condition can be named than one which subtly and unconsciously so suffuses a man that his life is an existence, a chronic, drudging, fearful, insecure groping for straws; a secret, indeed unaware flight from some threatening self-realization. We may grant, if the patient is so intensely harassed by symptoms which are painful and discouraging — even frightening — yet doggedly clings to them, denying all other difficulties, that their emotional causes, thus camouflaged and denied,

must be even more terrifying and excruciating. How then, can one say "only" neurotic, when not merely some part or organ in the body is sick, but indeed the whole person.

Perhaps Dr. Smith is right in the case of Mr. Jones. Perhaps palliative and supportive therapy are the best, since Mr. Jones may lack the intelligence or ego strength to be helped through explorations, often lengthy and costly, of his emotional patterns, his unconscious general and specific attitudes toward self and environment and his reactions to past and present stresses and frustrations. But Dr. Smith might be abandoning Mr. Jones to years of emotional invalidism — a life of pathetic, half-blind muddling through misery, self-deception and anxiety. It would be better, nay, it is imperative, that Dr. Smith, having made the diagnosis of neurosis, assess the patient's emotional and intellectual potentials and, if he feels there is the slightest possibility that Mr. Jones possesses some strengths, find ways of helping him discover and understand the *causes* of his symptoms. Often this is beyond the doctor's interests or available time. If so, then, with tact and patience, he should help the patient accept the advisability of consulting a specialist in the field — the field of emotional or "psychosomatic" disorders — psychiatry.

Recent issues of "Life" Magazine have run a series of thoughtful and thought-provoking articles on the present day relationships between medicine and the public. In these there has again been stressed the tendency of modern medical men to overlook the emotional aspects of all illnesses.

"Life" quotes Dr. Edward Weiss, Professor of Clinical Medicine at Philadelphia's Temple University: "In one-third of the (series of 200) cases, organic disturbances appeared to explain everything. In another third, organic disturbances were present, but symptoms were out of proportion to the cause(s). And in the last third, the illness, while real, was emotionally induced . . . If impersonal tactics of 'organic cause and effect' medicine were relied on . . . at least one-third of the patients would not get the help they needed."

The doctor's devotion, with interest and ardor, to the care of those with "real illness" is not good medicine if it involves misdiagnosis and consequent inadequate treatment of causes, ei-

ther organic or emotional in over 30 per cent of his practice.

The epithet "just a neurotic" may console the doctor's conscience and relieve his unconscious anxiety over some secret or subconscious inadequacies of his own. But what happens to the patient so labeled? All too often he wanders from doctor to doctor, clinic to clinic, because no blood count, no X-ray can detect his pathology. His "existence" oozes on at a sub-"living" level until senility and death.

Let it then be once again stated that the doctor's duty is to the "whole person" of the patient. To discharge this duty fully may indeed cost the doctor time and money. But the exploration (within reasonable and practical limits) of the patient's social and domestic history, as well as the medical history, is essential in no less than one-third of his cases. Such "prying" may cause uneasiness in the patient (and often in the doctor). It may elicit the kind of denials and overprotestation of symptoms illustrated in the case of Mr. Jones, in which case, it is hoped that the doctor has the perspicacity to read between the words and has the tolerance to refrain from condemning the patient as a conscious liar. But it may well become a rewarding and enlightening experience to cultivate techniques toward more complete and competent diagnosis and toward treatment of this considerable segment of the doctor's practice.

American medicine has a proud and lofty tradition. Its advances have benefited mankind throughout the world. Mortality has dwindled, life expectancy lengthened. But there is justification in the arguments of those who would socialize American medicine, that doctors no longer have the "personal touch" with their patients anyhow, so why not arrange for the financial "benefits" of socialized medical care.

Doctors individually (if they are to remain "individuals") must meet this argument. I know of no better bulwark against socialization than the cultivation of the awareness of the "person" in the body of the patient; and of an objective awareness of the "reality" of emotionally determined suffering. For the ancient duty to prolong existence and alleviate pain is no longer enough. The patient deserves to be helped to "live". And that is what every third patient is asking for, even though he may not know it.



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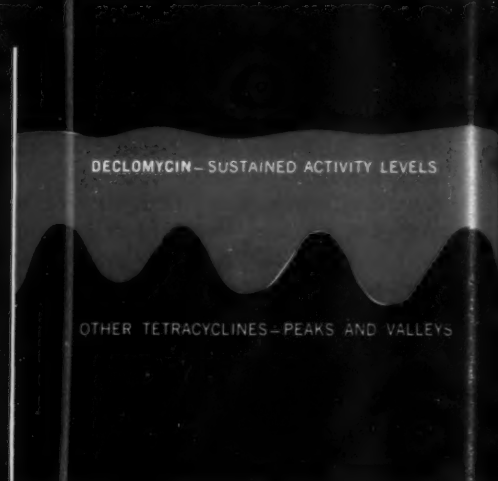
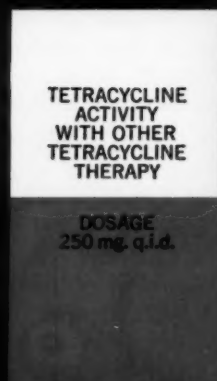
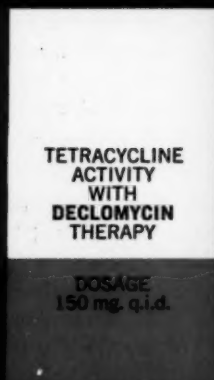
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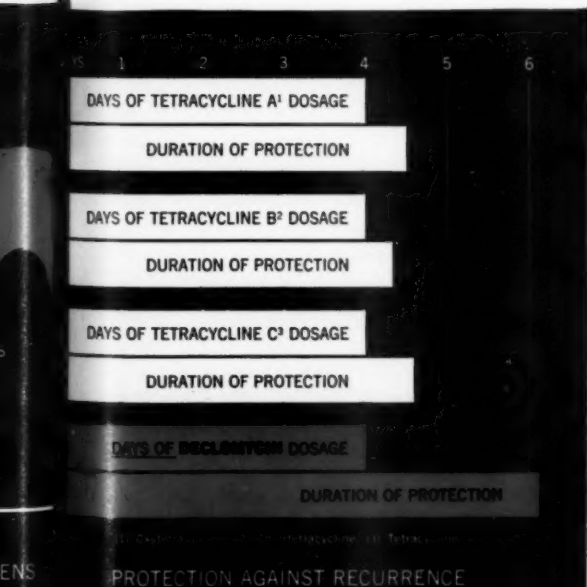
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Tumors of Central Nervous System*

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Emphasis is placed on early diagnosis by the clinician who first sees a case with signs and symptoms resembling those of brain tumor. Intracranial gliomas are not rare, particularly when it is recognized that the brain is one of the first three organs most likely to be affected by primary neoplastic process in males under 40 years of age and females under 20 years. The intracranial gliomas are classified as to cell type, usual location and degree of malignancy. Most frequent initial signs and symptoms are discussed and typical past errors in differential diagnosis given. Diagnostic aids such as electroencephalography, angiography, air contrast roentgenography and others are considered. The relationship of intracranial gliomas to the general cancer problem is emphasized. (C.W.E.)

DOCTOR Eisenbeiss, ladies and gentlemen, it is indeed an honor and pleasure for me to be in Phoenix again. Every time I have been here I have thoroughly enjoyed it, and this is no exception. Your traditional Arizona hospitality has certainly been evident to us who come here on this occasion.

Dr. Eisenbeiss has indicated that we are going to talk this afternoon about brain tumors and are to limit ourselves to the intrinsic tumors of the brain, the gliomas. By doing this, Dr. Eisenbeiss has eliminated from our discussion some of the tumors that have the best prognosis. We have immediately to delve into that group which is serious in its implications but in which we feel there is something to offer when seen early enough.

The two points I want particularly to emphasize are that the early diagnosis of these tumors rests not so much on the neurologist and neurosurgeon as with you who are in other fields of clinical medicine. It is you who are going to see these people first and who must get them into the hands of some one who will care for the definitive therapy if you are not prepared to yourself. There will be some allusion to the types of glioma and what can be done for them. The other point I want to emphasize is that these are not rare growths.

Tumor of the brain has more or less traditionally been regarded as a rare entity; we must revise our thinking in this matter.

As a basis for this revision, I would like to present to you some statistics. A report in 1931 by Helmholtz showed that out of 750 cases of

*Presented at the Seventh Annual Cancer Seminar of the Arizona Division, American Cancer Society, January 22-24, 1959 - Phoenix.

malignant neoplasm in childhood, the central nervous system was the one involved by far the most frequently. In a round table discussion in 1947, again a review of a considerable number of tumors showed that the central nervous system was affected more than any other system, as far as early involvement was concerned.

Reviewing the location of cancer, this work by Levin(1) showed that in females to age 20 the brain was among the first three organ systems in frequency of involvement by neoplasm. In the male, the brain was among the first three organs to be involved, up to the age of 40. This, therefore, is not a rare entity about which we are talking this afternoon.

Some more recent work was published in November of this year by Kurland(2), taken from work at Rochester, Minnesota, The Mayo Clinic. He proceeded on the hypothesis that all brain tumors in patients living in Rochester, Minnesota would be studied by The Mayo Clinic, and in 10 years there were 50 intracranial neoplasms that came from this group. The population of Rochester, Minnesota is given as a mean average of 30,000 during this time. Twenty-seven of these were primary tumors of the brain. (That is the group we are going to talk about this afternoon.) The incidence, then, would be 9.2 brain tumors per 100,000 population, per year.

The incidence was noted to increase gradually, but persistently, with age. There has been an idea that a drop off occurs after the middle or so-called cancer-bearing age. That has not been the case here.

Approximately one per cent of all the deaths reported are from primary intracranial tumors, and 1.8 per cent of all deaths are from a combination of primary and metastatic tumors to the brain.

With this information we are justified in concluding then that we have for discussion a lesion which may come to the attention of anybody in the practice of clinical medicine. Unfortunately, it may also affect anyone who is personally in that practice himself, as we who are in the field of neurological surgery have had distressing occasion to discover.

The gliomas we are about to discuss are those tumors which arise from the cells of the nervous system itself. From the clinical standpoint these

have come to include all intrinsic tumors of the brain.

Some classification of these tumors is necessary as a basis for discussion. There are a number of classifications which have been presented over the years. The simplest one with which I am acquainted was attributed to Dr. Walter Dandy. He said there were two kinds of brain tumors, the hard ones and the soft ones. The hard ones got better, and the soft ones didn't. We have a bit more complex classification than that which we have been using in our Center. This dates essentially to the classification of Doctors Bailey and Cushing published originally in 1926. On the basis of classification then we can draw some general conclusions about tumors from the clinical standpoint. (Remember, these are generalizations.) The tumors of the glioma group in the adult usually will be above the tentorium and in the child usually will be below the tentorium. There are many notable exceptions, but that is an average.

(Among the gliomas, we have some types over around the periphery of this drawing: astrocytes, oligodendrocytes, spongioblasts and medulloblasts, which are among the more common types of cells you will find in the glioma group.)

Most common of all gliomas in the classification which will be used is the astrocytoma. It is most frequently encountered because it affects all parts of the brain and spinal cord. In the child it tends to be in the midline and tends to be cystic with a mural nodule. In the adult, it is more commonly found above the tentorium. In the spinal cord it may be a cystic mass, which may be mislabeled "syringomyelia".

There are three principal subtypes of astrocytomas: the fibrous, the protoplasmic and the gemistocytic or large cell type. There is some variation in the degree of malignancy, the fibrous being the most promising, and the gemistocytic the least promising of these from the therapeutic standpoint.

The glioblastoma is the most common of the cerebral gliomas; but because it does not usually affect other parts of the central nervous system, it is second in frequency in the over-all group. This is a very rapidly growing tumor, with a tendency to spread along the fiber pathways going to the contralateral hemisphere and down the brain stem to the medulla. It is the classical

rapidly progressing tumor of the middle life.

The medulloblastoma is one of the most common types seen in childhood. It tends to arise from the roof of the 4th ventricle, either from cell rests there or from cell rests in the migration of the outer granular layers to the inner granular layers at about the time of birth.

The oligodendrocytoma is usually found in the white matter of the cerebrum. The ependymomas are usually found in connection with or very close to the ventricles of the brain or the aqueduct. They are also in the spinal cord, usually near the central canal, and in the caudal region arising from the filum terminale.

The polar spongioblastomas are usually found in the medulla, the 3rd ventricle or in the optic chiasm or optic nerve region. Sometimes they are in the corpus callosum.

These, then, are the principal tumor cell types with which we are dealing. What now of the first signs or symptoms indicating the presence of intracranial growth. The most common first sign — though still not in the majority of instances — is headache. This can come about by blocking of the cerebrospinal fluid pathways or by proximity of tumor to the meninges. Obviously not all people with headache have a brain tumor. But as a statistical point, more patients will present themselves with headache as a first sign of brain tumor than with any other first sign. The headache, therefore, is not to be passed off and forgotten. If it is not patently due to a brain tumor, put the point aside in your thinking, but do not forget it.

The next is the appearance of convulsion. (Actually, convulsion and hallucination should be one and the same because the organic hallucination is a sensory type of convulsion.) This results from the irritation of the brain cortex either by direct pressure on the nerve cells or as the result of interrupting some of their connections. It results in either a motor or a sensory attack, the latter being called hallucinatory. A patient after the age of 21 who has newly developing convulsive seizures, either motor or sensory, must be regarded as having a brain tumor until proved otherwise. The fact that this is not apparent at the first time the patient is studied does not mean that this patient again can be put aside. He must be studied and restudied. Sometimes these tumors will not become manifest to

our gross methods of examination for as long as four or five years. Many of them will be apparent, though, within six months or a year. They must be restudied. They must not be forgotten.

This point must be well remembered by all of us, and I am including neurosurgeons, myself, and others in neurology and neurosurgery, as well as people outside of these fields, because we must keep reminding ourselves too. Many patients come to all of us with headaches that at the outset are not particularly clear as to etiology. Any of us may see patients with the convulsive state.

Personality change is the next most frequent first sign of a brain tumor. This, of course, is aligned with certain areas of the brain, the temporal and frontal lobes in particular, and the corpus callosum to some extent. It can appear as a manifestation of mass of tumor elsewhere as well.

Other frequent first signs are visual disturbance affecting the visual pathways, which, as you know, run from the frontal to the occipital region throughout the entire extent of the brain. Auditory disturbance refers chiefly to a peripheral nerve tumor of the posterior fossa. Speech difficulty may occur in any expanding lesion arising in the dominant hemisphere. Drowsiness is a relatively late sign, a sign usually of involvement of the fluid pathways, and producing increase of intracranial pressure.

"Dizziness" is sometimes reported in patients who have involvement of the motor cortex or the cerebellum. This location is also reported at times to produce a staggering, or weakness and clumsiness. It may be reported by the relatives or may be the patient's complaint.

Gastrointestinal upset occurs in childhood as an early manifestation of increasing pressure. Harvey Cushing said that when any child comes in with recurrent nausea and vomiting he should have the optic fundi inspected, because frequently there will be papilledema.

Endocrine disturbance especially comes about from those tumors which involve the 3rd ventricle region — hypothalamus and the infundibulum — the area where we know endocrine centers exist.

If we are going to look at ourselves with ade-

quate self-criticism, we must think of where we have made our errors in the past. What have been the wrong diagnoses when brain tumor has ultimately been proved to be the correct one. Neurosis, epilepsy, cerebral arteriosclerosis, cerebral hemorrhage, sinusitis and intestinal flu are among these, and the early diagnostic symptoms and signs noted above can be reviewed, and one can see where these would fit in as an erroneous diagnosis for a time.

Other early diagnostic errors have been those of eye trouble or ear trouble. Of course these are not true diagnoses, but sometimes they have been found in hospital records. Meniere's syndrome, middle ear disease or otosclerosis are diagnosed in those patients who have had dizziness or vertigo as the only sign of their complaint. "Degeneration of the brain," another "diagnosis," again is not a true one but rather a term in which one might take refuge if he did not think of the possibility of a brain tumor.

"Hypertension" has been recorded as an explanation for headaches. Multiple sclerosis — a wastebasket if ever there was one in neurological nomenclature — has been so mistaken. Encephalitis and poliomyelitis have been miscalled, and again, if we think of the possibility of brain tumor, these are not likely to be mistaken. Meningitis, syphilis and the menopause are others. The menopause, of course, is far too often a reason for not carrying out adequate examination by all of us.

The chief reason for diagnostic error would be principally that a brain tumor has not been considered. It has been regarded as a rare entity. It has not been in the forefront of our thinking when we have the patient brought before us. In our hurry history and examination become inadequate. We do not think about this possibility in the patient with a headache, for example, or then maybe over-emphasis on misleading signs as head injury, syphilis or alcohol. A "head injury" patient can have a brain tumor as can the luetic and the alcoholic. One must bear these points in mind.

Now, what are the methods of differential diagnosis to avoid these errors? The first is: (I will re-emphasize this perhaps *ad nauseam*.) *to think of brain tumor*. And as one thinks of it, one thus includes a neurological examination in the general physical examination of the patient.

A neurological survey is not so complex but that it should be carried out in the course of one's study of a patient coming in with any of the complaints we have discussed. It does not take too long. It is, of course, of great importance if we are to pick up these neoplasms early.

The next point we want to discuss in our examination is the spinal fluid. The pressure here increases as intracranial tension builds up, and the measurement of this pressure and analysis of the fluid are of value. Spinal fluid studies must be carried out with care, for we can precipitate a serious complication such as herniation of the cerebellar tonsils or of the hippocampal gyrus. Even if there is no evidence of increased intracranial pressure, spinal fluid studies should not be undertaken carelessly. This investigation includes pressure, cell count and chemistry, especially protein. We never do a jugular compression test (a so-called Queckenstedt test) if an intracranial lesion is suspected. This can be misleading, even though the spinal fluid pressure is normal, and can result in the death of the patient. (The only reason for doing a Queckenstedt or jugular compression test is that one suspects a spinal cord lesion.)

Electroencephalograms are of some value in the early identification of a lesion in the brain cortex or a deep lesion affecting the brain cortex. The electroencephalogram may be a misleading test, however, if one is leaning on it heavily in the diagnosis of brain tumor. This is emphasized because too often we have heard "encephalogram" used as synonymous with "electroencephalogram". Most of us in the field of neurology and neurosurgery speak of "pneumoencephalogram" as being the "encephalogram" and electroencephalogram as having distinctly less value in the area in which we are carrying on our discussion today.

Pneumoencephalograms will be discussed by Dr. Hodes for you later. Plain films plus special air contrast studies have proved to be of tremendous value to us in the identification of these neoplasms and perhaps are depended upon in the localization of neoplasia for surgery more than any other single test. I will not go further into this at the present time.

Angiography, another radiographic diagnostic method, also will be discussed by Dr. Hodes in his portion of our panel discussion today. The

use of radioactive isotopes has had a considerable vogue. It has proved to be somewhat disappointing, although there may be some value in it. The procedure has been the injection of material which will be taken up by brain tumors due to the fact that the blood brain barrier in the neoplasm, the glioma, is usually lowered and certain material can go from the blood stream into these neoplasms. If a radioactive isotope of certain type can be put into the blood stream and can be concentrated in the tumor; then theoretically it can be picked up by counting devices, and the tumor can be identified. This method has not been used, at least in the community in which I work, as commonly as one would feel it might have been used when it first came to the general attention. At the present time it can be regarded only as still having some potential value if pitfalls can be eliminated.

Surgical intervention in the case of gliomas of the nervous system is usually but not always indicated. The reason it is usually indicated is that we cannot know exactly what sort of tumor we are dealing with without having a piece of tissue to study under the microscope. There are occasions, however, where the hazards of obtaining tissue can conceivably outweigh the great advantages of having a definite knowledge of the cytology of the tissue. Those must be matters of judgment on the part of the person who is to take the tissue.

The decision to take tissue may be affected by the history and physical findings, the general condition of the patient, and the region of the brain involved. If a neoplasm is deep on the left side of the brain, one would weigh the advisability of a surgical procedure there with greater care than if it were on the surface on the right side of the brain, for example. The apparent tumor size and the length of time that the patient has had symptoms all play their role in the decision as to surgery or no surgery. Most of the time, however, surgery is indicated in the glioma group. We must restrain our preconceptions as to what sort of tumor we are dealing with, for sometimes these may be wrong; and even when they are right, the outlook for a particular patient may be better or worse than we had anticipated. I shall never forget two patients, both sergeants in the Army, who were treated at about the same time. One of them had an extracerebral cystic tumor, a craniopharyngioma,

commonly regarded as having a fairly good prognosis. The other had a glioma of the ependymoma group. These patients have been followed over the years. The first patient is still in a government hospital, probably a permanent cripple because of recurrences of his tumor and irritation of the brain that has resulted therefrom. The second patient, the ependymoma, has his own business and is a very enthusiastic skier (maybe that's not in his favor!). He has a family and, as far as we can see, is a normal man in every way 19 years after surgery. By our preconceptions the latter patient was the one who probably would not do well and the former the one who would have been thought of as having the good prognosis. We must do the best we can for all patients who come to us. In this sort of problem we cannot predict what the future will hold with any degree of accuracy.

In a certain percentage of patients who are operated upon as presumptive gliomas, we are going to find instead other types of tumor including metastatic growth. It has been asserted in a recent panel discussion on this subject in the American College of Surgeons that more than 50 per cent of cerebral metastases become manifest in the brain before the primary becomes evident. This is a rather striking figure, but as we follow our incidence of metastasis in the clinic, I think it can be supported. Common primary sites of tumors that metastasize to the brain are the lungs, the breasts, kidneys and the melanoma group. The latter has been reported to metastasize to the brain in 50 per cent of all instances — a high incidence, but probably one that can be supported.

The surgical removal of a single cerebral metastasis, if it is incidental, cannot be regarded as catastrophic, for many of these patients will live for a year or more thereafter. Even if a metastasis is recognized and considered before the surgery is carried out, it should not be regarded as a contraindication for surgery. Patients with superficial metastases in the brain seem to do quite well following operation and oftentimes are out of the hospital earlier than many post-operative patients who have had laparotomies, thoracotomies and even other types of craniotomy. If the tumor seems reasonably accessible then, and if the patient's general condition is reasonably good, a probable diagnosis of a metastatic tumor to the brain should not be contra-

indicative of attempted surgical removal. If there are multiple metastases to the brain, however, surgery loses rapidly in potential value.

Gliomas and metastatic tumors may also involve the spinal cord. The gliomas affecting the cord are the same as those affecting the cerebrum. The astrocytomas and ependymomas, however, are considerably more frequent in the cord than are the other tumor types.

Metastatic tumors particularly affect the tissues around the cord and can produce compression of it. It should be emphasized that if a patient with a cancer in some other part of the body shows signs of progressing cord compression, one should look for a neoplasm metastasizing to the vertebrae in the vicinity of the cord and should decompress that cord at the earliest possible time. These oftentimes become emergency procedures because we often can avoid a paraplegia or a situation in which the patient will lose control of his bladder and bowel sphincters. A patient with signs of metastasis to the cord should not be given up but should be brought to the attention of someone who can carry out a decompression as early as possible. Certainly those patients are much more easily cared for when they have not lost this important function.

We will now turn to prognosis. With the gliomas the prognosis depends so much upon the tumor type. These are serious problems. The earlier the patient is seen, the better the prognosis. The tumor in the frontal pole, in the occipital pole and in the temporal pole, particularly the temporal pole, will carry a better prognosis than one lying deep in the brain, one which is going to metastasize or is going to spread along the fibre pathways to the contralateral hemisphere or into the brain stem.

The tumor which is on the surface which is going to seed into the subarachnoid channels — and any glioma can seed to the subarachnoid channels or the ventricles — is going to have a more grave prognosis than one which has not so seeded.

The medulloblastoma group particularly tend to seed, and that eventuality is taken into consideration when one plans the surgical therapy and postoperative care. Dr. Hodes will, I am sure, refer to x-ray therapy in many of these tu-

mor types. Given a reasonably early identification of the tumor, and given one which is accessible however, the prognosis in the intrinsic tumors of the brain, the worst group of all, is comparable to the prognosis in cancer of other parts of the body. It is better than the prognosis in most cancers of the lung, and it is comparable to most cancers of the stomach. It is better than most of the highly malignant cancers of the renal system. Glioma is therefore not a tumor which, when identified, should be regarded as a hopeless affair. It does carry a serious prognosis, but it is far, far from hopeless. Many patients will go for many years and will have useful lives during these years of survival.

What about the future? Brain tumors are part of the cancer problem. You have heard some discussion this morning concerning various etiological factors, the viruses. The glioblastoma multiforme has always attracted many of us because it seems to be a form of a granuloma, an infectious process. Thoroughgoing studies of glioblastoma multiforme have failed to reveal, so far, the presence of a virus. Yet we keep on looking. Something will appear, I am sure, probably in the relatively near future to help us understand these tumors better, but it probably will be by the development of our knowledge of cancers as a whole. The reason that these tumors are particularly attractive as areas in which to study cancer is that the tumors are nearly always confined to the craniospinal axis. They are part of the tumor problem. The solution therefore is interrelated with that of other sites. And with the changing concept predictable in our developing a better understanding of cancer, though, we feel we will get a better prognosis too as time goes on. We feel that we must have that hope and that we are justified in that hope.

A change in the early manifestations leading to the diagnosis of the lesion is unlikely, though. Therefore, the points we have mentioned — the early signs of tumor, the items that may lead to mis-diagnosis — these are likely to remain the same. These are the points I would leave with you. And most important of all is to continue to consider the possibility of the presence of a brain tumor!

1. Levin, Morton. Reported in "Cancer," Ackerman, L. V. and J. A. del Regato. 1947. C. V. Mosby Co., St. Louis, P; 1115, Ref. Pp 19-20.

2. Kurland, L. T. The Frequency of Intracranial and Intraspinal Neoplasms in the Resident Population of Rochester, Minnesota. J. Neurosurgery. Vol. XV, Pp 627-641.

Carcinoma Of The Bladder: Pathologic Aspects*

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CARCINOMA of the bladder represents approximately 1% of all malignant epithelial neoplasms. It is predominantly a disease of males, and occurs with a ratio of 3:1 to 4:1 as compared to females. About 60% of all carcinomas of the bladder occur in patients between 50 and 69 years of age. For many years, this malignant disease has been known to occur frequently in workers in the dye industry, particularly those in contact with aniline or other coal-tar derivatives. The compound believed responsible for the carcinogenic action on the bladder is betanaphthylamine. The carcinogenic effect of these coal-tar derivatives depends upon the duration and intensity of the exposure. Leukoplakia initiated by long-standing, chronic inflammation or mechanical irritation of the bladder may be followed by the development of epidermoid carcinoma. Both leukoplakia and epidermoid carcinoma of the bladder may occur in extrophy or

in cystitis cystica, but neither of these proliferative lesions have an apparent relationship to the presence of calculi in the bladder.

Carcinoma of the bladder also occurs with a high incidence in patients infested by *Schistosoma hematobium*. In Egypt, between 70 and 90% of the population is affected by this parasite. Because of the similarity between papillomas of the bladder and papillomas of the skin of viral origin, both in animals and human beings, a virus etiology of papillary carcinoma of the bladder has been postulated, but such relationship has not been proven.

The gross appearances of epithelial neoplasms of the bladder vary widely. These lesions may be single or multiple, papillary or sessile, or non-infiltrating or infiltrating. Benign lesions or papillomas arise in the mucosa and appear pink or red, friable, soft, villous or nodular. As malignancy supervenes, invasion of the vesicular wall with fixation of the neoplasm occurs. In

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the later stages, secondary infection and ulceration are common. It is believed that the majority of infiltrating carcinomas develop initially as more benign papillary lesions. These epithelial neoplasms, benign or malignant, appear most often in the region of the trigone about the ureteral orifices and on the lateral walls of the bladder. The predilection for these sites suggests that irritating substances in the urine may be important factors in etiology.

The neoplastic cells comprising these lesions originate in the transitional epithelium of the bladder. Some classifications consider all the lesions as carcinoma, regardless of their histological or cytologic patterns. Other classifications include four major groups:

1. Papilloma. This is a papillary lesion composed of transitional epithelium closely resembling that of the normal mucosa. The cells are uniform. Few or no mitoses are present and the basement membrane of the epithelial layer of the papilloma is intact, and there is no invasion.

2. Malignant Papilloma. In these lesions, the papillary structure of the neoplasm is distinct, but the neoplastic cells show varying degrees of pleomorphism and nuclear hypochromatism. Mitoses may be numerous. Although cytologically malignant, there are no evidences of invasion beyond the basement membrane.

3. Papillary carcinoma. These lesions are similar to malignant papilloma, with the exception that at least local invasion of the bladder wall beneath is demonstrable.

4. Carcinoma. Here the papillary characteristics rarely remain, and obviously malignant epithelium is invading the wall of the bladder.

These four stages of development have been classified as carcinoma grades I - IV.

As in any other malignant neoplasm, the microscopic pattern may vary within different portions of the lesion. While superficial biopsy may suggest that the lesion is benign, invasion beneath may be demonstrated on more adequate sampling. In some neoplasms, neoplastic cells assume a squamous pattern, and in others poorly defined glandular structures are occasionally observed. As a rule, even in ulcerated transitional cell carcinomas, an origin from the transi-

tional epithelium of the bladder can still be demonstrated. The malignant neoplasms bladder. Usually, the rapidity of invasion is proportional to the degree of anaplasia exhibited by the neoplasm.

Cytologic examination of urinary sediment by the Papanicolaou method has given positive accurate diagnoses in 50 to 90% of the cases of bladder neoplasm examined. It should be emphasized that severe inflammation in the bladder may produce changes in the non-neoplastic epithelium suggesting malignancy. Interpretation of Papanicolaou smears of the urinary sediment should be made with caution.

Carcinomas of the bladder most frequently metastasize to lymph nodes about the bifurcation of the iliac arteries. However lymph node involvement may extend to the level of the diaphragm. Metastases in regional lymph nodes are more prominent in cases where the neoplasm of the bladder has extended locally into the prostate gland or adjacent pelvic tissues. Metastases to the liver, lungs and bones are less common but may occur when metastases in regional lymph nodes are absent. Metastatic disease of the pleura, peritoneum, skin and brain also occurs.

Other types of neoplasms of the bladder are rare. Mucinous adenocarcinoma occurring in the bladder appears to be of urachal origin. Neurofibroma, leiomyoma, fibromyxoma, hemangioma, habdomyoma and other rare neoplasms have been described.

Of the solitary neoplasms with a benign structure (papilloma), some are cured by local removal, whereas others appear to be forerunners of multiple recurrent neoplasms of the bladder. Multiple recurring neoplasms with a benign structure (papillomas) may be of extremely long duration. However, local removal of individual papillomas does not usually result in permanent cure. Unless the entire area containing the neoplasm can be radically removed, the disease eventually has a fatal termination. All other solitary or multiple neoplasms (malignant papilloma, papillary carcinoma, carcinoma) run a more malignant course, and unless radically resected or destroyed, end fatally within months or a year. In most cases of carcinoma of the bladder, death is caused by urinary obstruction and infection, or by metastases.

Why diet is preferable to drugs

...in the control of serum cholesterol

The objective of therapy is the approximation of the physiological norm.

This is most satisfactory when it can be accomplished by dietary manipulation. The control of elevated serum cholesterol through relatively simple changes in the dietary pattern of the patient puts nature's own processes to work most effectively to achieve the objectives of treatment.

The dietary approach does more than correct the serum cholesterol problem. Because overweight, together with improper eating patterns, is so often involved, the prescription of corrective diet helps the patient to help himself by establishing sound nutritional practices.

For the prophylaxis and prevention of hypercholesteremia, the dietary approach affords the advantages of simplicity and economy. Diet therapy is for the long-term management of a chronic condition, while drug therapy is most efficient for acute situations.

The development of atherosclerosis is a slow process. It is believed that the onset of this condition is in early adulthood, but its clinical symptoms take as many as 20 years to manifest themselves. Simple changes in diet serve to keep the blood cholesterol concentration at an acceptable level.

Dietary therapy has other significant advantages over medication as follows:

1. Dietary adjustment involves little or no expense to the patient, whereas drugs are costly.

2. Dietary therapy may be made with complete safety—even for pregnant females.
3. Dietary therapy produces no side effects, whereas there is not as yet sufficient clinical evidence as to the long-term effects of drugs.
4. Dietary therapy brings about reduction in serum cholesterol through normal body processes, as yet not fully understood. On the other hand, some drugs can leave in the body accumulations of cholesterol precursors.
5. Dietary procedures do not usually generate new compounds in the blood which interfere with the chemical determination of blood serum cholesterol.
6. Dietary therapy offers a solution to the related problems of obesity which drugs do not.

Elevated serum cholesterol has long been linked to an imbalance in the ratio of the type of fat in the diet. Reductions in cholesterol levels have been achieved repeatedly, both in medical research and practice, through control of total calories and through replacement of an appreciable percentage of saturated fat by poly-unsaturated vegetable oil. An important measure in achieving replacement is the consistent use of poly-unsaturated pure vegetable oil in food preparation in place of saturated fat.

* * *

Poly-unsaturated Wesson is unsurpassed by any readily available brand, where a vegetable (salad) oil is medically recommended for a cholesterol depressant regimen.

More acceptable to patients. Wesson is preferred for its supreme delicacy of flavor, increasing the palatability of food without adding flavor of its own.

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Wesson is 100% cottonseed oil . . . winterized and of selected quality

Linoleic acid glycerides (poly-unsaturated)	50-55%
Oleic acid glycerides (mono-unsaturated)	16-20%
Total unsaturated	70-75%
Palmitic, stearic and myristic glycerides (saturated)	25-30%
Phytosterol (Predominantly beta sitosterol)	0.3-0.5%
Total tocopherols	0.09-0.12%

Never hydrogenated—completely salt free

m cholesterol



Arizona Medical Association Reports

The President's Page

The Physician and His State Medical Association

Lindsay E. Beaton, M.D.



Lindsay E. Beaton, M.D.

member in Arizona pays dues of only \$60.00, the extra \$10.00 being a contribution voted by the House of Delegates to the American Medical Education Foundation. To anyone who has participated in the work of our Association, the question is at once so unexpected and so misconceived as for a moment to take away the breath of answer. However, when one marshalls a defense of facts and figures, the reply to the detractor quickly passes from justification and explanation to certain pointed queries of the inquirer, as suggested in the peroration of this

The officers of a State medical society hears no more troubling question than that often shot at him by an uninformed member: what do I get for my dues? Inquiry may shade into accusation: I don't see that I receive any benefits from the \$70 I pay every year to the Arizona Medical Association (ARMA).

In fact, each mem-

essay. To any fair-minded critic, it can readily be demonstrated that the exertions of a State medical society in behalf of its physicians are not far short of prodigious. Their volume almost made the writing of this paper an unanticipated expense. When the Executive Secretary was asked to give an outline of the labors of the Central Office, he forwarded the synopsis with a note to the effect that he was worn out just thinking about all of the things that the Central Office did. The President felt impelled to offer him an extra two weeks vacation, fortunately declined on the ground that there was too much work to do.

For those who are not conversant with the structure and operations of our organization, a summary may be a helpful backdrop for the description of its performance. The ultimate authority of ARMA is its House of Delegates, democratically chosen by the physicians of Arizona through their county societies. Between meetings of the House, the Board of Directors, whose members have all been elected by the House, by explicit sanction of the bylaws has the full power of that body to manage our affairs. The collation of facts and the preparation of policy alternatives for decision by the Board of Directors is the main function of the Executive Com-

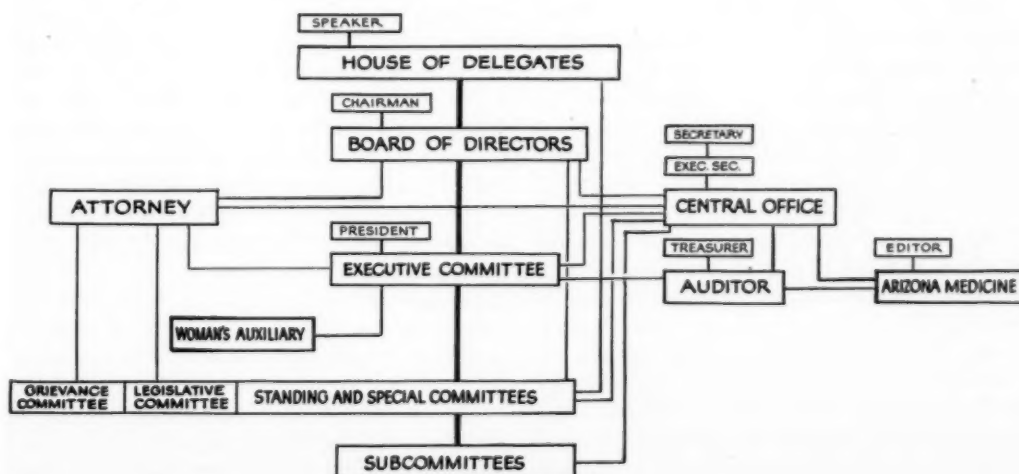
mittee, which consists of the five executive officers of the Association. The grist that comes through the Executive Committee to the Board of Directors derives largely from committee study of problems and recommendations for action. The bylaws provide for standing committees, and the President, with the approval of the Board, may appoint ad hoc committees for the consideration of special or unusual issues. The committees themselves have the prerogative of establishing sub-committees for intensive examination of specific sectors of their responsibilities. The ladder of policy, therefore, ascends from sub-committee to committee to Executive Committee to Board of Directors to House of Delegates. At each Annual Meeting the Board, the officers, and all the Committees furnish complete reports of their year's stewardship for the verdict of the House and for ratification if approved. Serving every echelon of Association business is the Central Office, together with its subsidiaries, our auditor and our attorney. Two ancillary establishments, *Arizona Medicine* and the Woman's Auxiliary, operate autonomously but always within limits set by ARMA and in undeviating accordance with its wishes and official program.

This circuit diagram of our society is not difficult to trace. The communications that contin-

ually pass over it and represent the work for which it was designed can present a bewildering pattern. Perhaps it is easiest to follow from the output point of the Central Office, through which flows the day by day activity of the Association. The average member cannot easily visualize the tremendous job done in his interest, directly or indirectly, through the Central Office and demanding the detailed attention of its small staff. The Central Office staff consists of our Executive Secretary and his assistant, and four stenographer-secretaries. This is not the place for bestowal of individual commendations, but it is proper to say as an aside that those who have been associated with the official affairs of ARMA feel to a man that without any question we have in Robert Carpenter the finest executive secretary of a medical association in the United States. In his assistant, Paul Boykin, we are seasoning a promising possible replacement for the evil day of Mr. Carpenter's retirement. The Central Office staff has the task of serving over 1000 physicians. At the time this article was prepared, the roster of the Association totaled 1047: 942 active members, 17 Fifty Year Club members, 13 Seventy Year members, 44 associate members, and 31 service members.

In addition to services provided each individual member and the faithful representation of

The Arizona Medical Association, Inc. ORGANIZATION CHART



the united viewpoint of Arizona's doctors, it should be recognized that the amount of work done by the Central Office in the routine administration of this major corporation is in itself immense. One wonders how our staff manages even to do this ordinary housekeeping much less accomplish the myriad special tasks that we require of it.

Reviewing, as I have in preparation for this article, merely the procedures in connection with our expenditures, purchase of equipment and supplies, and the accounting therefor, reveals them to be, as I presume they are in any corporation, a sizable charge. The recording of the proceedings of the House of Delegates, the Board of Directors, and the various committees of the Association is another assignment of unexpected magnitude. All of this entails a substantial volume of correspondence in preparation of meetings, the development of agendas, and the implementation of the determinations reached. A hint if not a detailed evaluation of the work of each of the committees of the Association will be given in a moment. The point here is that every one of these committees is enterprising and aggressive and preempts, entirely fittingly, a great deal of Central Office time. Either the Executive Secretary or his Assistant, and more often both of them, attend all committee meetings, which are usually held on a Sunday in Phoenix or Tucson. Each committee and many of the sub-committees requisition the attention of the Central Office. The staff furthermore handles the business and financial activities of *Arizona Medicine*, with the assistance of a full-time secretary in the Editor's office, utilizing 25 per cent of the time of the Assistant Executive Secretary and 25 per cent of the time of one of our stenographers. A vital and sensitive role is the political one, advice to and support of the Legislative Committee; during the meeting of the Legislature, Mr. Carpenter is on constant call at the Capitol Building in the advocacy of our interests, largely before committees of the Senate and House of Representatives. In this he and our counsel of course act to inform and assist the Chairman of the Legislative Committee and the officers of the Association. Almost equal time will in the future be demanded of the Central Office by our Public Relations Committee; not only is constant vigilance necessary to inspect the information on health being dis-

pensed by the organs of public information and the image of the physician they project, but also co-operation with press, radio, and television is essential to furnish accurate stories on advances in medical science and the ways in which they will be made available to the citizens of Arizona. The Central Office, as clearing-house for the Committee, in addition must meet the requests of many paramedical and non-medical agencies for speakers, exhibits, and information. Finally, the Scientific Assembly Committee claims the concentrated attention of the staff each Spring in the preparation of the program of Annual Meeting, which is after all the great professional observance of the Association. The Central Office people particularly have the chore of making all of the dispositions at the hotel selected, contacting and negotiating with exhibitors, and arranging the countless details of the convention, details the complexity of which can be credited by no one who has not had the responsibility and dubious pleasure of supervising our vernal clambake. I have at times idly wondered if the Bylaws provision that the President-Elect shall chair the Scientific Assembly Committee is intended as a final trial by ordeal of the man to be honored the following year as the nominal leader of the Association. If the poor fellow ends up on Van Buren Street, he just was not the right choice.

Statistics need not be boring; they can be fantastic. The bare facts of the Association's epistolary production may convince the most dedicated skeptic that our staff is not exactly loafing. Every year the Central Office uses more than 10,000 letterheads, 5000 second sheets and 12,000 copy sheets, 20,000 envelopes, and 20,000 sheets of electronic reproduction paper. We have estimated that out of the Central Office go 14 letters per stenographer per day, 7 days a week, 52 weeks a year. This is routine correspondence, but each letter must be dictated and each one has significance in that it carries the weight of the Association's name and opinion. There is no need to multiply examples. Anyone who grasps the entirety of the job done by the Central Office cannot but be humbled by the devotion and loyalty of every member of that staff. One wonders, as a matter of fact, why they give us so much more than full measure. I can only assume that they like the physicians whom they serve, that they have their own allegiance to the public

health, and that they choose to make their contribution through ministrations to us, "their doctors". It is not possible to exaggerate their usefulness to us. They are the civil servants of medicine; they labor for us with an astounding constancy, when we are weak and when we are strong, when we are wise and when we are stupid. And they never, whatever the provocation, find fault with us. I can only ask the reader how he would like to have 1047 bosses.

Any member who wishes reasonably to assess the uses to which his dues are put should have at least general knowledge of the expenditures of ARMA. For an itemized account, the Annual Report of the Treasurer is read to the House of Delegates at the Spring convention. The budget for the following year is also submitted at that time. In the future the Board of Directors is going to see a bi-monthly auditor's report on our current financial status. In round figures, here is the way your money is spent. When one puts aside such items as our \$9200 contribution to AMEF, our transmission of some \$15,000 of AMA dues, the monies that go through our hands from the exhibitors in connection with the Annual Meeting, and similar bookkeeping entries, one finds that we have for the coming year an anticipated outlay of approximately \$72,000.00. Of this an item of \$42,000.00 defrays salaries, the various taxes levied on those salaries, industrial insurance, and Blue Cross-Blue Shield coverage for our employees. An \$8,000 sum goes for travel and other expenses in connection with the operation of the Central Office. Our committees cost us \$5,500 a year, with the Legislation Committee, including its needs for legal guidance, amounting to \$3,000 of that total. The Annual Meeting is ticketed for \$2,000, in addition to the exhibitor and registration fees and other self-supporting income it brings in. We give the Woman's Auxiliary \$1,000. Our attorney is posted for \$6,000, our auditor for \$500. In the budget for the coming year \$5,000 has also been allotted for the Publishing Committee, to ensure an auspicious embarkation of our venture with *Arizona Medicine*. The rest of our monies are accounted for by various miscellaneous expenses. It will be noted that none of the officers of the Association and none of the committee members are reimbursed in any way for the many hours they spend on your business, except for luncheons on the days of meetings.

Occasionally, officers or official representatives who travel to important AMA or governmental assemblages in distant parts of the country are reimbursed for their travel expenses, but even this concession is held to a minimum. Any self-appointed watchdog can be sure that there is no extravagance; the Association's pennies are pinched till Mr. Lincoln is cyanotic.

Before one begins to count the ways in which the Association serves the individual member, it is proper first to reflect on what the Articles of Incorporation call "the objects, purposes and powers of this corporation and the general nature of the business it proposes to transact." Article III sets the tone: "to bring into one organization the entire medical profession of the State of Arizona; to promote the science and art of medicine; to promote and elevate the standards of medical ethics and medical education; to promote public health and in all instances and manners to operate as a non-profit business league and scientific and educational organization for the above-stated purposes." It is clear that the writers of what is truly our constitutional sanction were concerned with the employment of our collective energies in behalf of the public rather than narrowly in behalf of the economic gain of the individual doctor; and on two occasions the House of Delegates without dissenting vote has ratified the declaration. In following this sweeping injunction, however, the Association affords many very direct benefits to the individual physician. First of all, some of these may be listed as the most obvious answer to the question: what do I get for my dues?

Certain personal advantages are of an immediate economic nature, advantages that could not be found objectionable by the severest social critic of medicine. Among such is our placement bureau, which monthly tabulates opportunities for physician location throughout the State and answers inquiries about rural and urban opportunities. A second business service is the group accident and sickness insurance program written through the National Casualty Company of Detroit, with supplemental coverage through the Commercial Insurance Company of Newark, N. J. The battle of ARMA against the inclusion of doctors under social security and its vigilant guardianship of professional standards in the struggles with various private and governmental agencies that continually press for fixed fee

schedules are other examples of its advocacy of the member's vocational interest. Through its Benevolent and Loan Fund ARMA stands ready to assist any physician who is in financial distress, through direct grants from the income of the fund. This is a transformation of the old legal defense role that the Association once played, which now has been taken over by insurance companies. Personal good, if not measurable economic good, results from the Association's preservation of the history of medicine in Arizona, our piece in the great fabric of the tradition of our art, and from its maintenance, in the Central Office, of a record of each man's station in organized medicine. This includes a biography, current changes in professional situation and report thereon to AMA, an addressograph plate, and a comprehensive file card. Finally, it will mournfully provide his obituary.

Of less evident monetary value to the physician but still in the category of direct individual benefits are several other ARMA functions. It represents the doctor, as he could not be represented alone, with the Legislature, the American Medical Association, various lay organizations, and the public. Often these are stands of clear ultimate consequence for the member's community status and professional and economic well-being. Second, the Association also acts as an avenue of continued education for the physician, through the Annual Meeting, through seminars and special courses, through sponsorship of a State medical journal. *Arizona Medicine*, furthermore, furnishes ready pages for any Arizona physician who has a scientific matter worthy of report or who requires the precedence of prompt publication. ARMA is also a source of information. The Central Office will break its collective neck to dig out data pertinent to medicine on the request of any member. It is in the constant process of collecting such intelligence from the press and from other sources of public record, from other groups in organized medicine, and from many paramedical and lay associations. Though it is no longer necessary for it financially to rally behind the doctor accused of malpractice, the Association is still his shield; its Grievance and Medicolegal Committees are at the call of any member with a juridical or ethical problem. Through its Industrial Relations Committee, it protects him in his dealings with the Industrial Commission and the in-

dustrial employers of our State, and through the Medical Economics Committee and the Professional Committee respectively it extends assistance on questions of a business character or disputes of purely medical jurisdiction. No physician who has ever found it necessary to request the Association's help in such matters would ever challenge the use of his dues. In all of these areas — professional, legislative, economic, legal — your State medical society is always alert for relevant information and especially for any threats to the conduct of private practice, with the single aim of giving the Arizona physician access to knowledge he needs for the competent management of his professional and personal affairs.

Lastly, no catalogue of personal benefits is complete without appreciation of the advantages that any individual in modern collective society derives from identification with an organization. In our enormous and complex culture the individual voice is too often drowned out, but spoken through the megaphone of a recognized group it can carry far, can conceivably change the course of events, shake the old and introduce the new. This is one of the direct uses to which you can put your Association. This gathering in purposeful companies for various public enterprises is in the accepted tradition of the United States; in the early days of the Republic De Tocqueville wrote admiringly in "Democracy in America" of our impulse to join voluntary societies. It is the intention and hope of the officers and directors of ARMA that the channels are being kept open through which any member may speak his piece with the correct conviction that he will be listened to and that the Association will be his amplifier should he by consent be the prophet of his peers.

More significant to the physician than the personal gains he secures through his medical association are the social and scientific riches that he and his fellows can give to the society in which they live. This altruistic element in the work of ARMA is the real heart of its reason for being. Perhaps first in rank of these philanthropic functions is insistence on professional competence in our fellows. Through close liaison with the Board of Medical Examiners, the Association labors to keep out unfit doctors, charlatans and cultists, not, as assumed occasionally in certain sectors of the press, to protect the eco-

nomic position of a closed guild, but rather to protect the health of the people. In fact, acting for its members, ARMA vigorously encourages the entrance of new doctors onto the medical stage in our State. The Benevolent and Loan Fund makes available loans on a revolving basis to assist worthy young residents of Arizona who wish to secure a medical education. Additionally, through its placement bureau, the Association helps new doctors to find sites for practice and thus stimulates the immigration of welcome fresh professional talent from the country over. Our suggestion to the Board of Regents of the university system that an investigation be made of the feasibility of an Arizona medical school has borne fruit in the form of the Commonwealth Fund study. If Arizona finally founds a medical college, it will furnish many physicians for the State. The Grievance Committee safeguards the citizen against malpractice by any physician and against unethical conduct by any physician. Nationally medicine has been taunted with whitewashing the malefactors within its ranks; this is not true of Arizona.

For last I have kept the prime function of the doctor, the promotion of the public health, which the Association fosters in more ways than I can count. It proposes legislation that it believes necessary and supports good legislation proffered by others. It should be of interest to the members that not since we have had our present Executive Secretary and our present counsel has the Association ever failed to have passed by the Legislature any measure that it has sponsored. On the other hand, we have never failed to defeat any bill that we opposed as inimical to public health. The task of the Public Relations Committee in keeping the citizenry informed about health matters is an equally important part of the job. And, to end the story, the Association's benefits to the individual member are equally benefits to the individual patient. Such functions as keeping the doctor professionally abreast, publishing a journal, assisting the Industrial Commission, working out fee schedules, or placing physicians in rural practices are indisputably as much in the public interest as in the doctor's interest. For the future, ARMA plans to devise its own solutions for some of the social and economic problems that block the successful distribution of scientific medical care to all sectors of the populace. We are not satisfied to stand pat; we are anxious to meet

every challenge and to give our fellow citizens the very best that we can, not only in individual care but also in broader health measures.

For all of this, your satisfaction in supporting medicine's corporation, your voice in the profession's policies, the individual benefits you receive and the social contributions you make, you pay about 16½¢ a day. With this munificent sum you hire the ablest Executive Secretary in the business, and you procure the meticulous attention to your affairs of our attorney, Edward Jacobson, who has repeatedly demonstrated an exceptionally keen and creative mind in our behalf. For this yearly levy you not only purchase many personal services but you sustain an organization that provides at once a pedestal and a loud-speaker for you in making known your ideas and wishes in every area from public health to politics.

A very good case could be made for the opinion that this is the most economical \$60.00 any doctor ever spends. What do you get for an equal amount if you take a few friends out for dinner or if you sneak inside your wife's favorite dress shop? Perhaps the right emphasis is not what the physician gets for his \$60.00 but what he is accomplishing with it. Perhaps, when its members realize the encompassing work that their Association does for them in Arizona and when they foresee the potential for further service, they will insist through their representatives to the House of Delegates that their dues be raised. Then an enlarged staff can perform the functions of ARMA more expeditiously, more thoroughly, and in more telling detail, and Arizona's doctors can contribute increasingly to the development of the house of medicine in a demanding but stimulating future.

PROFESSIONAL COMMITTEE

Meeting of the Professional Committee of The Arizona Medical Association, Inc., held July 24, 1960.

ORGANIZATION

Aging — Samuel J. Grauman, M.D.

Cancer and Medical Education — Robert B. Leonard, M.D., and Paul J. Slosser, M.D.

Doctor Slosser to be associated with Doctor Leonard on Medical Education.

Civil Defense and Safety — Howard W. Kimball, M.D.

General Medicine — Orin J. Farness, M.D., Chairman, and Lowell C. Wormley, M.D.

Doctor Farness being the Chairman of the subcommittee on General Medicine, is to incorporate, in addition to the Poisoning Control information, also liaison with Allied Medical Specialties and Rural Health and Rural Placement Distribution of doctors.

Hospital — Nursing — Hard-of-Hearing—Blair W. Saylor, M.D.

Maternal and Child Health — Richard B. Johns, M.D.

Mental Health — Otto L. Bendheim, M.D.

Rehabilitation — Industrial Health—(Crippled Children) — Ray Fife, M.D., Chairman, and Thomas H. Taber, Jr., M.D.

Venereal Diseases — Paul J. Slosser, M.D.

In directives from the President of the Association, this Committee was oriented as to projects which will be considered by the Professional Committee during the coming year, including:

- (1) Revision of the Medical Practice Act of Arizona providing for an adequate professional law;
- (2) Fee Schedule based on relative values for medical services;
- (3) Rural placement of physicians in areas not now supplied;
- (4) Hospitalization needs of the State;
- (5) Care of the indigent, aged and aging; and
- (6) Relationship between organized medicine and the osteopathy branch of the healing arts.

With this basic background, the Committee proceeded with the various subcommittee reports.

SUBCOMMITTEE REPORTS

Aging

Doctor Grauman, reporting on the problems of the Aged and Aging, presented a letter from a representative of the Youngtown (Committee on Medical Service) group near Phoenix, requesting information referable to a community physician in that area of a population of some fifteen hundred people, fifty years and older in age, who have no medical doctor at the present time. Request for information and aid in assuming and formulating a health plan to include *preventive* as well as corrective medical care was sought.

After considerable discussion it was determined further information is required both from the requesting group as well as from Blue

Shield/Blue Cross before any decisions are made.

It was resolved to appoint a member from the Internal Medicine liaison committee from the Maricopa County Area to meet with the spokesman from the Youngtown group, along with a representative from Blue Shield/Blue Cross, to gain information referable to the second and third paragraphs of the letter received from the Youngtown group, and report back to this Committee at its next meeting.

It should be noted that in addition to the information requested by the Youngtown group, there is need for consideration of zoning and organization of such towns making available areas for medical clinics and so forth, all of which will be considered after the requested report has been received before the next meeting of this Professional Committee.

The recent report of the American Medical Association on the Aging and Aged referable to Forand-type legislation and providing medical and rehabilitative care for the aged was considered, the following resolution having been adopted:

It was moved, seconded and unanimously carried that the Professional Committee recommends that the Board of Directors of The Arizona Medical Association apprise the Governor and the Governor's Committee on Care of the Aged of our strong support for legislation that will keep the management of the problems of the aged on the local city and county level, based on extensive study by this Committee of all facets of the problems of the aging, as they are now being considered on a national level and as set forth in the statement of the American Medical Association, reporting on House Bill 12580, 86th Congress, dated June 27, 1960.

Cancer — Medical Education — Venereal Diseases

The problems of the subcommittee on Cancer was reported on by Doctor Leonard and recent literature circulated throughout the State referable to "Krebiozen" in the treatment of cancer was discussed.

It was resolved that the Arizona Medicine Journal be requested to point out to the members of the Medical Association the need for critical evaluation of pamphlets such as the one recently distributed throughout the State, and

point up, also the lack of demonstrable active substance in the "Krebiozen" medication and the lack of adequate testing of this therapeutic agent in the treatment of cancer; also pointing up that there are generally sound medical grounds for viewpoints other than those reported in this particular pamphlet.

Civil Defense and Safety

The Civil Defense Subcommittee report by Doctor Kimball pointed up the potential need for the establishment and availability of federal and medical teams to serve the medical needs in the instance of catastrophe. It was further reported that the State Department of Health anticipates obtaining a full-time U. S. Public Health Service doctor to correlate medical problems, associate with Civil Defense, particularly with respect to assignment of doctors to heavily-populated areas and to civilian defense hospitals in low-populated areas, in order that these planned hospitals will have adequate staffing in the event of a civil emergency.

Crippled Children — (Rehabilitation — Industrial Health)

Doctor Taber, subcommittee chairman on Crippled Children was not present and no report from him was forthcoming.

General Medicine

Doctor Farness reported that during a recent meeting the availability of poisoning control information file cards in the Department of Pharmacology in the University of Arizona was discussed. It was the feeling that this information should be made available to osteopathic hospitals in the interest of better care for patients in their institutions. The Professional Committee sees no objection whatever, and in fact favors making such file freely available to osteopathic hospitals.

Doctor Farness further reported request for information referable to nutrition and dietary studies through the State. Apparently little is being done insofar as anyone knows in this area. No action was taken on this particular problem.

The question of the Association approving and sponsoring the "Dietary Control Week" activity in this State was considered. It was determined by the Committee that such activity is not a function to be sponsored on the State level, but, rather, on a local county medical society level, as they see fit.

With respect to the Tuberculosis control policies of the Veterans Administration, no action was taken by this Committee since it is the opinion of the subcommittee chairman, following his review of existing State laws, that they cover adequately the problem, associate with the Veterans Administration, and if the State laws are invoked, it will cover all requirements considered in this report.

The problem of rural placement of physicians was considered at this point. No action was taken. However, this will be pursued at later meetings of the Committee and information will be sought from all its members before coming to any definite decision.

Hospital — Nursing — Hard-of-Hearing

Report of the subcommittee on Hospital and Nursing Problems was given by the Chairman of the Committee as a whole, since Doctor Saylor was newly appointed and has not had time yet to acquaint himself with the material in his file.

The problem of the North Mountain Hospital in Phoenix (Maricopa County) was brought up, and after discussion it was the unanimous opinion of the Committee that the resolution forwarded to the Board of Directors of the State Medical Association be reiterated as it was originally forwarded to them, without modification and with a strong feeling that there is need for aggressive action along the lines recommended in this report, for resolving the North Mountain Hospital-Doctor Hall problem.

Maternal and Child Health

In the absence of Doctor Johns, Doctor Leonard read the former's report, which embraces the following recommendations:

- (1) The Committee recommends that the Board of Directors be notified that the doctors in Arizona should be given the information in a report from the AMA Council on Food and Drugs regarding the product Enzylac;

- (2) That the State Board of Health undertake a study referable to Perinatal and Prenatal problems in the hospitals, gathering together statistics in a progressive study and publishing the results for the information of this Association. As far as initial and voluntary studies in the State are concerned, and from the Maternal and Child Health standpoint, Doctor Grauman points out that at this time a Mrs. Grace Ryan, through the Southern Arizona Health Association, refer-

ring to Mr. Virgil Hancock as the Director of this, is doing some study in the trigonal and voluntary problems in the State, and it is recommended to Doctor Johns that if he sees a need for pursuing this problem further, he contact this source of information; and

(3) That no action be taken by the Professional Committee on the problem of silver nitrate prophylaxis of ophthalmia neonatorum.

Mental Health

Doctor Bendheim not being present, no report was available.

Rehabilitation — Industrial Health

In the absence of Doctor Fife, his report was read and incorporated in the files of the Committee. However, no action will be taken thereon until the next meeting when Doctor Fife is present to specifically make recommendations on the various findings that he has gathered from studies on rehabilitation activities in this State.

OTHER BUSINESS

Florida Medical Association

A report from the Duval County Medical Society, Florida, referable to problems associated with hospital accreditation, involving infringements on the rights and privileges of the practicing physician to maintain his integrity, was considered.

It was moved, seconded and unanimously carried that the Committee recommends to the Board of Directors that the Association register its approval and concurrence in the Duval County (Florida) Medical Society's findings, and take similar action to be implemented through our Delegate to the A.M.A.

Blue Cross/Blue Shield

New Business was brought up by Doctor Farness in two categories. Doctor Farness, on the basis of problems of hospital bed availability and care of chronic illnesses, pointed out the accreditation of Comstock Crippled Children's Hospital in Tucson as meeting the requirements for accreditation and acceptance for adequate care on inpatient level of medical and convalescent crippled children's work, and pointed up the need for this essential service to be recognized by Blue Cross and measures taken to implement Blue Cross-type of coverage for this particular organization in Tucson. In addition to this, the inequities of emergencies, both medical and surgical, being taken to the county hospitals, which are fully accredited in both Mari-

copa and Pima Counties, was discussed with respect to Blue Shield/Blue Cross failing to recognize charges for payment from admissions to these two hospitals for patients who are covered by Blue Shield and Blue Cross.

It was moved, seconded and unanimously carried that this Committee recommend to the Board of Directors that serious consideration be given to enacting measures so that county hospitals, and specifically the Comstock Children's Hospital, be included in reimbursement for those insured by Blue Cross and Blue Shield.

It was determined to defer consideration of Doctor Farness's second topic dealing with representation on the Arizona State Board of Health.

Lorel A. Stapley, M.D., Secretary

PROFESSIONAL LIAISON COMMITTEE

Meeting of the Professional Liaison Committee of The Arizona Medical Association, Inc., held in the Convention Center of the Safari Hotel, Scottsdale, Arizona, Sunday, July 31, 1960. Noel G. Smith, M.D., chairman, presiding.

SUBCOMMITTEE REPORTS

Allied Professions

Robert H. Cummings, M.D., chairman of the Subcommittee on Allied Professions, being unable to attend this meeting, submitted a report of that subcommittee's activities and recommendations in its meeting held March 23, 1960. The recommendations of the subcommittee with regard to a complaint by The Arizona State Pharmaceutical Association vs. Philip D. Windrow, M.D., regarding dispensation of unlabeled drugs are listed as follows:

"1. Dr. Windrow is found to be innocent of any improper conduct, either ethical or legal, in carrying out a research project, at no expense to the patient, for the aforementioned company.

2. The company is well aware of the legality of making this medication available to individuals for investigative purposes, thus complying with the state laws in this matter.

3. It is still our belief that scientific investigation is to be encouraged by all those allied in the practice of medicine.

4. The secretary of the Arizona State Board of Pharmacy was, at least, guilty of making unfounded charges, by virtue of giving credence to rumor and failing to properly investigate these charges."

It was moved, seconded and unanimously carried that the subcommittee's recommendations be approved with the further recommendation that a strong letter in this regard be written to Mr. Duncan, Secretary of the Arizona State Pharmaceutical Association.

Letters regarding liaison meetings with the Arizona Podiatry Association and the Arizona Osteopathic Society of Physicians and Surgeons over the signature of Lindsay E. Beaton, M.D., President, were reviewed and it was directed that copies thereof be forwarded to Doctor Cummings for his review together with the directive to establish such meetings with these groups.

It was further determined that Doctor Cummings be requested to contact Stanford F. Farnsworth, M.D., Director — Maricopa County Health Department, obtaining information on the "staph" problem at Mesa General Hospital (Osteopathic) prior to meeting with the Osteopathy representatives.

It was further directed that Doctor Cummings obtain a copy of the Podiatry Act of the Arizona statutes, making recommendations to the committee regarding the Podiatrists' use of drugs, injectables, surgery, etc., prior to liaison with the representatives of that group.

Careers and Arizona AMEF

It was reported by Doctor Noel G. Smith, that Chester G. Bennett, M.D., assigned as chairman of the Subcommittee on Careers and Arizona AMEF had submitted his resignation to the committee.

It was directed that the President, Lindsay E. Beaton, M.D., be strongly urged to appoint Dermont W. Melick, M.D., as a member of the Professional Liaison Committee urging acceptance of such appointment in that he is the most likely member of the society to initiate and activate this very important program on careers.

It was further directed that copies of the AMA brochure entitled "Program Materials on Medical Careers for High Schools — Colleges — Communities" be forwarded to each member of the Professional Liaison Committee for study and review.

Governmental Medical Staffs

William G. Payne, M.D., chairman of the Subcommittee on Governmental Medical Staffs, reported on the results of investigation of the medical services offered employees of Navajo Ordnance Depot at Flagstaff and it was deter-

mined that the indemnity insurance program provided government employees recently initiated and activated by the Federal Government will aid immensely in overcoming and correcting the aforementioned problem.

It was further directed that on receipt of communication from the Medical and Surgical Faculty of the State of Maryland regarding the information sought pertaining to the "Dean's Committee" having to do with non-service connected disability care in VA hospitals, be forwarded to Doctor Payne for review and report following receipt thereof.

On the report that the Randolph Schol (Arizona Children's Colony) did not have a Medical Advisory Board, the Subcommittee on Governmental Medical Staffs was directed to formulate requirements of all state supported schools regarding their needs for Medical Advisory Boards and prepare recommendations for the Committee's action.

Nurses

Max Costin, M.D., chairman of the Subcommittee on Nurses was directed to contact the President, Lindsay E. Beaton, M.D. for results of his communications with Arizona State Nurses Association officer(s), continuing liaison with the Arizona State Nurses Association and the Licensed Practical Nurses Association.

Association of Physicians and Surgeons

Lavern D. Sprague, M.D., chairman on the Association of Physicians and Surgeons being unable to attend, no report was given.

Public Health and Schools

Ben P. Frissell, M.D., Chairman of the Subcommittee on Public Health and Schools, reviewed past efforts of this Association in the Arizona State Legislature with reference to the current raw milk statutes.

It was directed that Doctor Frissell prepare a report on the subject, submitting the same to the Executive Committee with the recommendation that the Legislative Committee take appropriate action in the matter.

Public Health — Commissioner — Arizona State Department of Health — Replacement

Doctor Frissell reviewed the activities of the Committee during the last session of the Arizona State Legislature in increasing the salary and other benefits for the Commissioner of the Arizona State Department of Health. It was the consensus that selection of a com-

missioner should be a requirement of the Arizona State Board of Health, however, the subcommittee will and does volunteer its services for screening and interviewing candidates for the position.

Schools

Noel G. Smith, M.D., Chairman, former chairman of the Subcommittee on Schools, reviewed the activities of that subcommittee during the fiscal year 1959-60, its report and recommendations to the Board of Directors of the Association for the committee's information. In view of that recommendation, it was a suggestion that local public health departments be requested to initiate a program of pre-school clinics for the children of medically indigent families, the working staff to be provided by public health departments. Where public health departments are not available, the private physician will be requested to donate his services, working through the component county medical society.

To initiate the program and obtain information regarding the availability and willingness of the members of the State society to donate their services as consultants in school health in this regard, it was determined that Doctor Smith would prepare a letter to be forwarded to all members of the society.

Methods of initiating such a program were discussed at length. The consensus favoring the possibility of a seminar or annual workshop for volunteers, followed by notification to school administrators and school nurses that the volunteer in the community would be available for consultation.

It was moved, seconded and unanimously carried that Doctor Smith's recommendations be forwarded to the Executive Committee for approval and immediate action.

Woman's Auxiliary

Ernest A. Born, M.D., Chairman, being unable to attend this meeting, no report was given.

Loel A. Stapley, M.D., Secretary

BENEVOLENT AND LOAN FUND COMMITTEE

Meeting of the Benevolent and Loan Fund Committee held July 28, 1960.

MINUTES

It was moved, seconded and unanimously carried that, following the granting of a loan,

the Registrar of the school of record be notified that a loan had been granted to the applicant, but that the money would not be disbursed until he was duly registered for the school year. Upon proper notification of official enrollment for the school year from the Registrar to the Association's Central Office, the check would issue.

Discussion followed on mechanism of disbursing funds, resulting from advice to the Committee that one applicant found it unnecessary to withdraw the entire \$1500 applied for and granted. It was the consensus of the Committee that such an applicant might, in later years of medical school, withdraw funds up to the original grant without further Committee action. It was felt that the disbursing officer(s) might suggest to applicants that the funds granted not be withdrawn in one lump sum but, rather, that funds be issued as need arise therefor at intervals throughout the school year, but in no event for more than the total amount of the grant.

It was also the consensus of the Committee that loans for the fifth year of medical school (internship) be considered only on special request for such consideration and thorough investigation as to reason therefor.

Katherine Willingham

The loan of Katherine Willingham, approved on August 23, 1959, and never completed since the final application was not filed, was further reviewed.

It was moved, seconded and unanimously carried that the approved loan to Katherine Willingham be rescinded; and should Miss Willingham desire future consideration for a loan, that she be required to start as a new applicant.

Paul Bernard Comer

The application of Paul Bernard Comer for a loan pending his matriculation in Baylor University Medical School was considered.

It was moved, seconded and unanimously carried that the loan to Mr. Comer be approved, in the amount of \$1500, and that Mr. Comer be so notified.

Ronald B. Minson

The application of Ronald B. Minson was reviewed by the Committee.

It was moved, seconded and unanimously carried that this application be approved and a loan in the amount of \$1500 be approved, upon his matriculation in the University of California,

Los Angeles, Medical School, in September, 1960.
Charles Arthur Frazer

A loan application from Charles Arthur Frazer for the second consecutive year in the amount of \$1500 was considered.

It was moved, seconded and unanimously carried that the loan in the amount of \$1500 be approved, subject to Mr. Frazer's matriculation and registration in Tulane University Medical School in September, 1960, and on receipt of anticipated response from his references.

Thomas Michael Hudak

An application for a loan for the second consecutive year by Thomas Michael Hudak, in the amount of \$1500, was also considered by the Committee. Mr. Hudak's application has not as yet been completed; however, the previous application, together with letters of recommendation received, were studied.

It was moved, seconded and unanimously carried that this loan in the amount of \$1500 be approved, subject to receiving the properly completed application and anticipated response from references referred to therein.

TRUST FUND ACCOUNT

It was reported that the Valley Bank has expressed an interest in handling the Benevolent and Loan Fund as a trust. Doctor Dudley suggested that we request of the Valley Bank a concrete proposal to this effect. It was also suggested by Doctor Brown that inquiry be made of the Bank of Douglas as to whether they have any suggestions or proposals to offer.

Respectfully Submitted
Lorel A. Stapley, M.D., Secretary

PUBLIC RELATIONS COMMITTEE

Meeting of the Public Relations Committee of The Arizona Medical Association, Inc. on Saturday, July 30, 1960.

ORGANIZATION

Doctor Young reviewed the remarks of the Board of Directors of the Association in its meeting held June 5, 1960, referable to a program of publicity through paid advertising, together with the directive that the Public Relations Committee undertake a study of the problem and submit recommendations to the Board at its next meeting.

Considerable discussion was held and many

valid ideas were presented with thought towards development of an active public relations program; the availability of the source of complaints directed toward the doctor of medicine; ways and means of obtaining facts regarding such complaints; and the possibilities of formulating a plan whereby such complaints may be aired without undue criticism directed to medicine.

A review of the program of the American Medical Association's Public Relations Conference, scheduled to be held in the Drake Hotel, Chicago, on September 1 and 2, 1960, was presented for the committee's information and discussion was held in that regard.

It was moved, seconded and unanimously carried that Doctor Young represent this committee and the Association at its expense during the Public Relations Conference aforementioned, to be held in Chicago on September 1 and 2, 1960.

It was the expressed hope of the committee that AMA could provide a strong background and basis for an active Public Relations program in Arizona.

The Central Office of the Association was directed to obtain details of the program for public relations through paid advertising as is currently indicated in effect through the California Medical Association.

It was suggested that a questionnaire be forwarded to each component county medical society and possibly each member of the Arizona Medical Association for suggestions and recommendations toward accumulating facts on complaints on the complainants' "home grounds" and possible means of providing settlement in a like fashion.

Respectfully submitted,
Lorel A. Stapley, M.D., Secretary

LOCAL OPPORTUNITIES

ASHFORK — Population 700. North centrally located — Railroad center. Contact the Women's Club, Ashfork, Arizona.

BAGDAD — Population approximately 2,000. Opportunity for GP who is willing and able to do obstetrics and general surgery. Mining community. New 12-bed hospital. Excellent income possibilities with initial guarantee. Second doctor needed due to increased volume of work. Excellent housing and schools. For further infor-

mation, contact Richard G. Hardenbrook, M.D., Bagdad Hospital, Bagdad, Arizona.

CAMP VERDE — Located in the heart of a large farming and ranching area on the Verde River. Approximately 100 miles north of Phoenix. Badly in need of a medical doctor. Contact Ivy N. Moser, R.N., Camp Verde, Arizona.

COOLIDGE — Excellent opportunity for a GP. Population 5,000 — in addition to servicing surrounding farm area. Nearest hospital located in Florence, approximately nine miles from Coolidge. Currently five physicians serving the area. Office facilities and most equipment, including X-ray, available on rental basis from local M.D. Contact Thomas E. McCormick, M.D., 321 West Central Avenue, Coolidge, Arizona.

EL MIRAGE — Population 2,000 — and including the trading areas of Surprise, Youngtown, Peoria and Luke Air Force Base, the population is estimated at 7,000 to 8,000 persons. Opportunity for a GP due to retirement of doctor currently serving, with the possibility of school service. Climate is excellent, warm and dry. Office facilities are available in the area surrounding El Mirage from Glendale (9 miles) to the east, and Wickenburg (35 miles) to the west, there are only two doctors to serve this community. The need for a physician and surgeon is very real and one should do very well. For information write Mr. H. Faulkner, Town Clerk, Town of El Mirage, El Mirage, Arizona.

ELOY — Need a doctor of medicine, preferably a GP. Population of 4,000 in farming community with several small towns near by. Located approximately midway between Phoenix and Tucson. Contact H. Howard Holmes, M.D., Eloy Medical Center, Eloy, Arizona.

GLOBE — Population 10,000 and including the mining and cattle areas of Miami, Superior, Ray, Hayden, Winkleman, Payson and San Carlos; population estimated at 30,000 persons. Located about two hours by car from either Tucson or Phoenix. No ENT man in the area. Ideal climate, with the best area for outdoor activities. Contact Eugene R. Rabogliatti, D.D.S., 149 S. Broad Street, Globe, Arizona or A. J. Bosse, M.D., 245 South Hill Street, Globe, Arizona.

HOLBROOK — Population approximately 5,500 — elevation 5,080. Excellent opportunity for GP. Arrangements can be made to take over existing vacancy in practice. Contact Donald F. DeMarse, M.D., Box 397, Holbrook, Arizona.

MIAMI — Opportunity for GP — Industrial hospital staffed by approximately seven doctors who care for personnel and families of those who work for the three principal mining companies. Community served by many mining and ranching interests. Contact R. V. Horan, M.D., Miami Inspiration Hospital, Miami, Arizona.

MORENCI — Mining community near New Mexico-Arizona border. Population 10,000. Has vacancy at hospital for GP. Contact C. H. Gans, M.D., Morenci Hospital, Morenci, Arizona.

PAGE — Population growing by leaps and bounds at the site of the new Glen Canyon Dam Project. Current estimates are 6,000 to 8,000 total. Only one M.D. is now located in Page and he has facility available. Located about 90 miles north of Flagstaff. Building project is estimated to be concluded in ten years. Write Ivan W. Kazan, M.D., 6th Avenue & South Navajo, Page, Arizona, for full details.

PHOENIX — Maricopa County has several excellent associations (salary or partnership) available in metropolitan Phoenix and surrounding towns in General Practice, Ophthalmology, ENT, Pediatrics and Anesthesiology. Neighborhood locations are also available for GP's. Contact Maricopa County Medical Society, 2025 North Central Avenue, Phoenix, Arizona, AL 8-6901, advising medical training, military and family status, age, health, etc., and enclose small photograph.

PHOENIX — Excellent opportunity for Ophthalmologist or EENT man as associate. Contact E. G. Barnet, M.D., 1120 Professional Building, Phoenix, Arizona.

PHOENIX — State Department of Health-Child Development Center. Opportunity for doctor of medicine (Pd) with three years' experience. Male or female. Monthly salary \$690 — full time. Operation includes (a) a doctor of medicine (Pd); (b) two or three psychologists on a consultant basis; (c) a psychiatric social worker; (d) a teacher specializing in child development; and (e) clerical people as required. Scope: Mentally retarded or emotional problems of pre-school children. Contact Mr. Thomas Golden, Arizona Merit System, 11 North 7th Avenue, Phoenix (AL 3-3189).

SNOWFLAKE — Located in Northeastern Arizona is seeking a doctor of medicine. Population approximately 4,000. Nearest hospital located in Show Low, 19 miles from Snowflake. Increased lumber activity anticipated. Mormon

L.D.S. community. Contact F. W. Erickson, D.D.S., Medical-Dental Clinic Building, Snowflake, Arizona.

ST. JOHNS — Seriously need a doctor of medicine, preferably a GP, in this east-central Arizona community. Population is approximately 1,500 with several other small towns in the general area. About 20 miles from New Mexico in the beautiful rim country of Arizona. Contact Donald F. DeMarse, M.D., Box 397, Holbrook, Arizona.

TOLLESON — In need of GP. Serves a trading population of from 12,000 to 15,000. Ten miles west of Phoenix, with elementary and high schools, churches of all denominations. Complete office and equipment for GP is available on reasonable term lease or purchase. Contact Mr. F. E. Babcock, President, Chamber of Commerce, 9112 West Van Buren Street, Tolleson, Arizona.

TUCSON — The VA Hospital is in urgent need of a General and Thoracic Surgeon. They prefer someone who is Board certified, but would take someone who has had special training as they have the local men in this field available for consultation service. State license is necessary (but not necessarily an Arizona license). Contact S. Netzer, M.D., Director, Professional Service, VA Hospital, Tucson, Arizona.

WILLCOX — Population approximately 2,000 — and including surrounding area, the population is estimated at 4,000. Immediately in need of a general practitioner and surgeon; must have state license or be eligible for same. Opening for an associate. Office available approximately three (3) blocks from the twenty-bed hospital in community. Tucson, Arizona within a locality of 85 miles. Contact Sotero Antillon, M.D., P.O. Box 867, Willcox, Arizona.

* * * * *

**FOR INFORMATION ON OPPORTUNITIES
IN THE FIELD OF INDUSTRIAL MEDICINE, CONTACT:**

Harold J. Mills, M.D., Phelps Dodge Hospital, Ajo, Arizona.

Carl H. Gans, M.D., Phelps Dodge Hospital, Morenci, Arizona.

Ira E. Harris, M.D., Miami Inspiration Hospital, Miami, Arizona.

Elvie B. Jolley, M.D., Copper Queen Hospital, Bisbee, Arizona.

H. W. Finke, M.D., Magma Copper Company Hospital, Superior, Arizona.

John Edmonds, M.D., Kennecott Copper Corporation Hospital, Ray, Arizona.

Francis M. Findlay, M.D., San Manuel Hospital, San Manuel, Arizona.

SENIOR CITIZENS-FOR-KENNEDY COMMITTEE

Senator John F. Kennedy announced August 12 that Congressman Aime J. Forand (Dem.—R.I.) has agreed to serve as National Chairman of the Senior Citizens-for Kennedy Committee.

This organization, which will headquarter in Washington, D. C., will concentrate its efforts on voters over 65 years of age and will operate under the overall direction of the Citizens-for-Kennedy Committee.

Congressman Forand told Senator Kennedy he was pleased to accept this appointment because of the lead "Senator Kennedy has taken in legislation for the aged. His sponsorship of the medical care for the aged bill in the Senate, his work to enact legislation to provide housing for the aged and his work as Vice-Chairman of the Senate committee on the Problems of the Aged are all indications of Senator Kennedy's interest in this vital field."

Senator Kennedy said he was honored to have Congressmand Forand head up this vital committee.

Squibb Announces Chemipen

Squibb Alpha-Phenoxyethyl Penicillin Potassium

new chemically improved penicillin
which provides the highest blood
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penicillin therapy



As a pioneer and leader in penicillin therapy for more than a decade, Squibb is pleased to make Chemipen, a new chemically improved oral penicillin, available for clinical use.

With Chemipen it becomes possible as well as convenient for the physician to achieve and maintain higher blood levels—with greater speed—than those produced with comparable therapeutic doses of potassium penicillin V. In fact, Chemipen is shown to have a 2:1 superiority in producing peak blood levels over potassium penicillin V.*

Extreme solubility may contribute to the higher blood levels that are so notable with Chemipen.* Equally notable is the remarkable resistance to acid decomposition (Chemipen is stable at 37°C. at pH 2 to pH 3), which in turn makes possible the convenience of oral treatment.

And the economy for your patients will be of particular interest—Chemipen costs no more than comparable penicillin V preparations.

Dosage: Doses of 125 mg. (200,000 u.) or 250 mg. (400,000 u.), t.i.d., depending on the severity of the infection. The usual precautions must be carefully observed with Chemipen, as with all penicillins. Detailed information is available on request from the Professional Service Department.

Supply: Chemipen Tablets of 125 mg. (200,000 u.) and 250 mg. (400,000 u.), bottles of 24 tablets. Chemipen Syrup (cherry-mint flavored, nonalcoholic), 125 mg. per 5 cc., 60 cc. bottles.

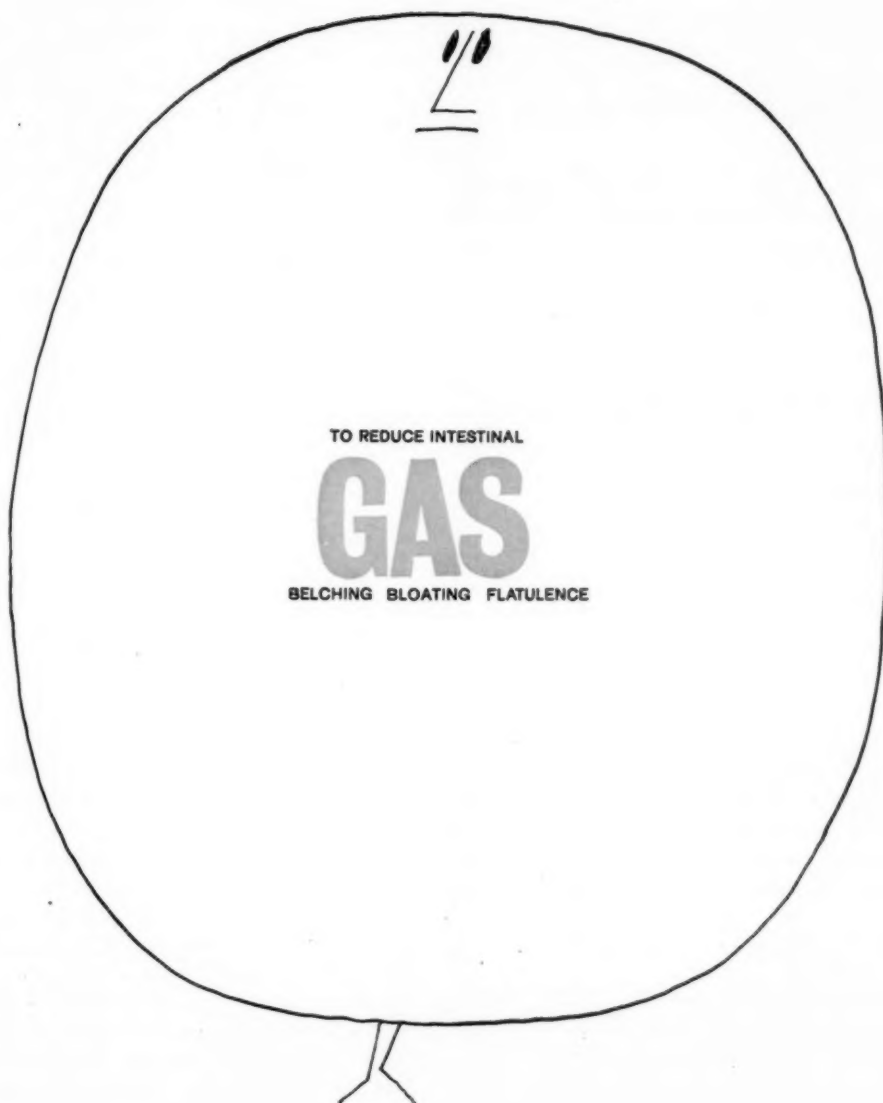
*Knudsen, E. T., and Rolinson, G. N.: *Lancet* 2:1105 (Dec. 19) 1959.

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Each Kanulase tablet contains Dorase,[®] 320 units, combined with pepsin, N.F., 150 mg.; glutamic acid HCl, 200 mg.; pancreatin, N.F., 500mg.; oxbile extract, 100 mg. Dosage: 1 or 2 tablets at meal-time. Supplied: Bottles of 50 tablets.

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Medical Society of the United States and Mexico

Fifth Annual Meeting

NOVEMBER 8-12, 1960

At this writing, September 6, 1960, the organizational machinery in Guadalajara and Mazatlan continue to grind on toward the target date of November 8. From Tucson we recently attempted to canvass the plans of our American members by means of a return postal card questionnaire, and were able to tally the following results:

Total number of persons planning to attend	155
Number planning to go by train ...	90
Number planning to travel by air ..	60
Number planning to travel otherwise	5

We were told from Guadalajara that, if 150 persons or more committed themselves to go by rail, a special train could be organized. From the above figures, however, it appears unlikely that such a number would be available to travel in this manner, and, therefore, those of us who prefer this mode of transportation, will use the regularly scheduled train which departs from Nogales, Sonora, daily at 5:30 p.m. The round trip Nogales-Guadalajara-Nogales is \$47.20. It will naturally be somewhat higher if it includes

the leg by way of Mazatlan.

We have been asked from Guadalajara to handle all the announcements, circulars, questionnaires, etc. from Tucson, for the American membership. This we shall be eager to do, as the information trickles in from Mexico and we have the opportunity to pass it on to you by mail. We are particularly anxious to know more details about the scientific program, especially the Mexican contributions. From our side we already have a distinguished roster of American speakers, including, among others, the Commissioner of Health of Arizona, Dr. Clarence Salisbury; also Drs. Lester Dragstedt, John Scarff, Maxwell Lockie, Harry Thompson, and others. We are also most curious to know some of the preliminary details of the social program our hosts in Guadalajara and Mazatlan are preparing for the meeting. Likewise we are anxious to receive instructions from below the border concerning the matter of hotel and train reservations.

Dr. Chavez plans to send us a questionnaire that we will mail our American members within

the next two or three weeks, accompanied by a cover letter containing the latest information available to us on all the points mentioned above.

You are respectfully reminded to initiate negotiations soon with your local travel agent if you wish to travel by air. It is suggested that you secure your Mexican immigration permits from your local Mexican consul rather than at the border. Your attention is also invited to the U. S. Public Health requirement of recent vaccination (smallpox) before re-entering U. S. territory.

We thought you might be interested in seeing a fascimile of the circular letter recently mailed from the Guadalajara headquarters to the Mexican membership recently, in connection with the meeting; it is reproduced below.

**SOCIEDAD MEDICA DE ESTADOS UNIDOS
DE NORTEAMERICA Y MEXICO
MEDICAL SOCIETY OF THE
UNITED STATES & MEXICO**

Guadalajara, Jal., Agosto 11, 1960

Sr. Dr. J. Gabriel Cortes M.,
M. Bárcena No. 79,
Ciudad.

Estimado señor Doctor:

Corresponde al grupo mexicano de nuestra Sociedad, promover en este año la celebración del evento con que periódicamente cumplimos con el acuerdo que aceptamos como un gustoso compromiso, de acercar científica y socialmente, haciendonos un solo grupo, a medicos norteamericanos y mexicanos.

Al efecto ha organizado su

5A. REUNION ANUAL

que se llevará al cabo durante el próximo mes de noviembre, los días 8 y 9 en la ciudad de Guadalajara y 10 y 11 en Mazatlán, el más hermoso puerto de nuestro litoral del Pacífico.

Para tal ocasión, deseamos recordarle la importancia de su asistencia y la conveniencia que para el mejor éxito de nuestra celebración representa, el que se sirva usted aceptar la invitación que en forma muy especial nos permitimos hacerle, para que presente Trabajos, los que deberá inscribir con el suscrito, antes del día, próximo mes de septiembre, en Pavo 112, Desp. 103, de Guadalajara, Jal.

DR. EDUARDO CONTRERAS REYNA
Secretario

ECR/ocv.

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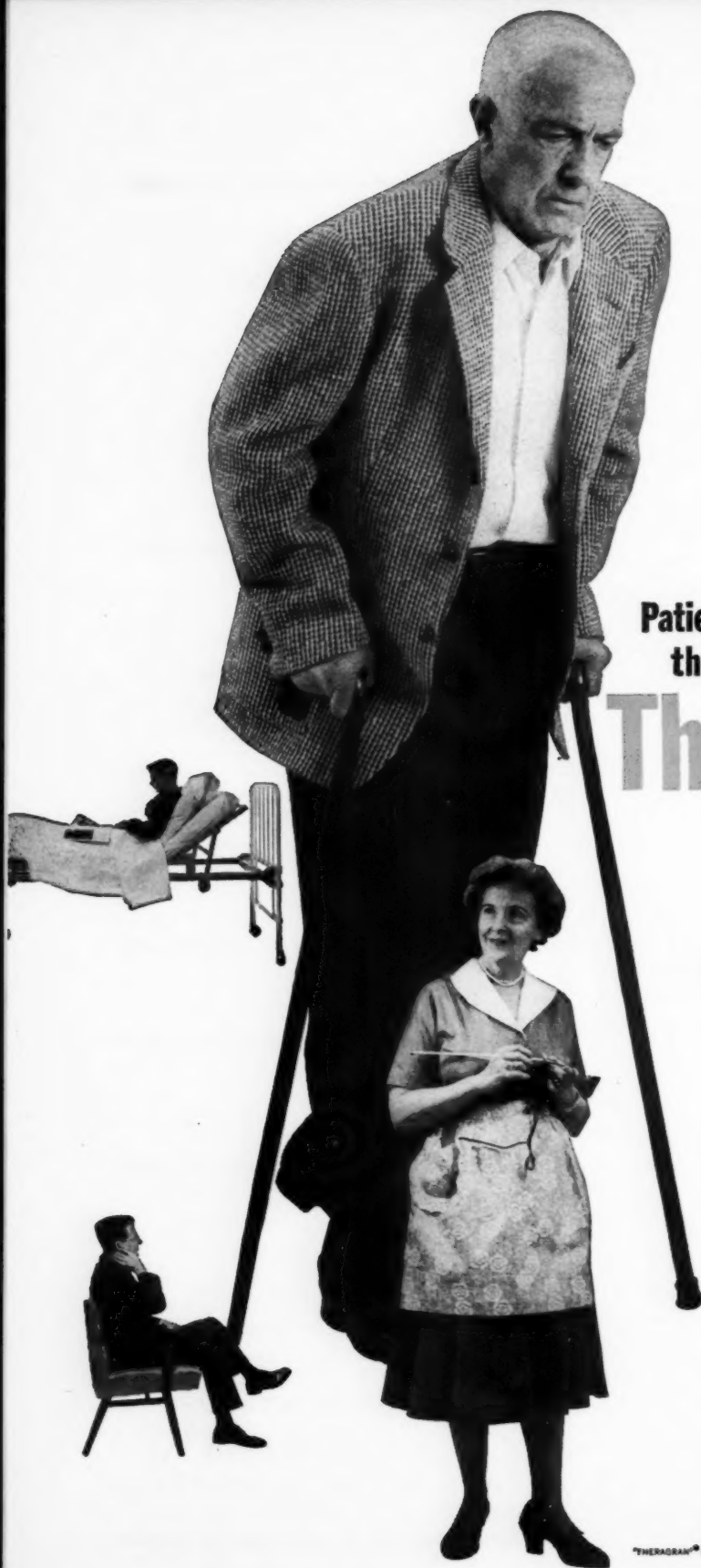


**For Complete Information
CONTACT**

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3424 N. Central Ave. — AMherst 6-2403

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1-41 a list of the above references will be supplied on request

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Editorial

THE POLITICAL DUTY OF MEDICINE

Physicians, since time immemorial, have had a genuine interest in the total welfare of man. It is axiomatic that the health of the people cannot be separated from their social, economic, emotional, and political existence. Therefore, whenever Government threatens to control these facets of life we must become actively concerned in order to fully discharge our obligations.

Politicians have been branded as "dirty", therefore we have been reluctant to jeopardize the dignity and integrity of our noble profession.

We have failed to remember that we have entrusted these "dirty-politicians" with our political future. We must also realize that these same politicians have been the most vociferous in admonishing us to confine our efforts to the sick and leave the politics to them. This they have done because they are more aware of, than we, of our potential influence which might be contrary to their selfish motives.

There were four physicians who with full knowledge of their respective responsibilities pledged their "lives...fortunes...and...sacred

ARIZONA MEDICINE

Journal of

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AND
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UNITED STATES AND MEXICO

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CONTRIBUTIONS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules should be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English or Spanish, especially with regard to construction, diction, spelling and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Be brief, even while being thorough and complete. Avoid unnecessary words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.
6. Exclusive Publication - Articles are accepted for publication on condition that they are contributed solely to this Journal. Ordinarily contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
7. Reprints will be supplied to the author at printing cost.

(The opinions expressed in the original contributions do not necessarily express the opinion of the Editorial Board.)

honor" when they signed the Declaration of Independence.

There are many sincere honest politicians who are dedicated to the preservation of our Constitutional Government and its provision for continued freedom . . . we must join them before it is too late . . . we must join them not only in thought but positive actions . . . it is later than most of us are willing to admit. Socialism is here in part, and its completion is potentially just around the corner of Nov. 8, 1960.

Our problem can no longer be confined to whether or not the Forand Bill becomes law or that we be included in an insolvent social security system. The whole question can be simply stated . . . will we and the citizens of these United States be able to retain the Rights and Freedom contained in our Constitution and the Bill of Rights?

Our patients think of us not only as ministers of their health, but educated leaders from whom they would seek counsel and direction. We must with revived vigor and sincerity, without fear or timidity, exercise our over-all purpose.

Politicians control the actions of government, hence we are obligated to become politicians if we choose to protect not only our personal interests but also the well-being of all mankind. We must not default.

LBS

CIVIL DEFENSE IS A FULL-TIME JOB OF THE PUBLIC HEALTH DEPT.

Suddenly in recent weeks, after much lethargy, certainly no more than a "do-nothing" attitude for 10 years, some of the people of Tucson are becoming interested in a Civil Defense program. Possibly this same interest is developing in Phoenix and over the state — probably not, for only in Pima County have the people been forced to think of the prized target they will make with the establishment of the Titan missile bases and the Davis-Monthan bomber facilities.

While this is a prized target, there are many reasons that the Hoover Dam, the bridges across the Colorado and a population center as Phoenix all are targets.

Again we are forced to ask what has been done on a national, state and county level to im-

plement a reasonable Civil Defense force. Reams of paper and directives have been issued, but is there an effective organization? I do not believe so. The "do-it-yourself" policy is non-productive.

We are not taking satisfactory steps to protect our people. We have not had satisfactory leaders.

There are many aspects of Civil Defense that are not medical in nature, and this does call for an organization of lay personnel. However, such a great part of the program must be carried out by the medical profession that it is imperative that a satisfactory and complete organization be established. This can only be done through the Public Health Department.

There should be a full-time employee of that department implementing on the state level the recommendations made by the national offices of Civil Defense. This cannot be done in a haphazard manner by part-time or volunteer personnel. Some of these appointees have never accepted the philosophy that Civil Defense can be an effective arm in our defense program. The fatalistic attitude, the acceptance of defeat by every obstruction, has no place in this organization.

We continue to talk that we are in a crucial struggle with Communism. We must accept that Civil Defense is a life insurance program. It must be established on a complete and efficient basis. Further delay cannot be tolerated, and all segments of our government are guilty of condoning this delay and relegating a Civil Defense program to a very subordinate position.

We can no longer take the attitude to let someone else do it. Medicine must lead the way to an effective organization.

DWN

MEDICAL CARE FOR THE AGED

The Forand-Kennedy Bill and the Nixon Bill have been defeated by our national legislative bodies. However, the new federal-state program that is to become effective October 1st, and which will probably become operational gradually, will help finance medical care for (1) the 2.4 million persons over 65 who are on relief rolls and (2) other needy persons over 65 who aren't so destitute they qualify for relief checks for food and housing but still don't have resources enough to pay for needed medical at-

tention.

Coverage will depend upon the action our state legislature takes to share in this cost and the number of elderly persons who will pass the "means test". This latter to be prescribed by each state.

Let us act now to participate in the establishment of a fair and equitable law that will meet the needs of the people and yet will not be a fraud upon the doctor. Let us not deny the existence of this legislation — the vote of Congress was overwhelming, 368 to 17; we must accept this as the desire of the public and not go our willful way and state that we will accept no dictates on how we will practice medicine. This law does not dictate how we will practice medicine. It is an effort to provide actual benefits for some per cent of the 16 million persons now over 65 but who cannot meet their own needs.

It is suggested that whatever plan is adopted by the state that medical social workers be employed to screen the applicants and that the criteria for reductions of the physicians' fees be determined by a special committee on which the society has strong representation. Persons certified for reductions should receive a card indicating percentage reductions to be allowed or even the recommended fee.

Certainly the object of the plan must be to maintain better and more easily available medical services for elderly persons, to adjust charges according to their ability to pay, to develop a plan that will have the co-operation of the medical profession and to maintain a *freedom of choice* of physicians by the patient.

DWN

NURSES PAY

The listing by *World Wide Medical News Service* that Canadian doctors top the income list ahead of architects, engineers, lawyers, etc., is disturbing in view of the fact that the lowest paid among professional groups are the nurses.

This disparity carries into American medicine. It deserves further evaluation and calls for adjustments. To expect a medical team to operate efficiently with one unit of it paid on the average less than \$200 per month (in Canada) does not give satisfactory consideration for the ability of those working with us.

Medical care has become a team function; and while we all agree that the advances of medicine have made it possible for the doctor to have a very acceptable income, the income of the paramedical members of the team has not been properly adjusted.

We need their help, allegiance and co-operation. Improvement of their financial return will bring this about along with obtaining an improved calibre of nurses and technicians entering these allied fields.

DWN

Editor — ARIZONA MEDICINE

Dear Sir:

I wish to call your attention to the Cooper Bill S. 3570 that is now before the Senate Labor and Public Welfare Committee. The stated intent of this bill is said to be for the purpose of providing humane treatment for experimental animals. However, it is evident from studying the bill that the intent is to regulate scientists and their use of animals and eventually, by additional legislation, prohibit entirely the employment of certain types of animals for research.

The German and British scientists are presently suffering from such a law. American researchers have been able to take the lead in many areas of medical importance because they have not been hampered by such restrictive legislation.

As you know, man is still plagued by numerous ills that will require many more years of careful animal experimentation. Nothing should be permitted to deter our efforts in providing the necessary knowledge for the betterment of mankind.

I know of no scientists that deliberately mistreat experimental animals. As a matter of fact, they are frequently provided with better housing and care than can be afforded for staff personnel.

I wish to take this opportunity to urge that the individual members of the Arizona Medical Association vigorously oppose Bill S. 3570. If it becomes law, biological and medical research in this country will suffer a tremendous "set-back."

It is important that men practicing medicine

become familiar with this most undesirable bill and express their views to our state senators, Barry Goldwater and Carl Hayden. In addition, a letter to Senator Lester Hill, Chairman of the committee on Labor and Public Welfare, would not be amiss.

Sincerely yours,
KENNETH WERTMAN, Ph.D.,
Head of the Department
Bacteriology Medical Technology,
University of Arizona, Tucson

Darwin W. Neubauer, M.D. Editor
Arizona Medicine
1021 Central Towers
Phoenix, Arizona

Dear Doctor Neubauer:

This is my letterhead. It is designed by a teenager. It indicates that there is so vastly much more to be uncovered by THEE PHYSICIAN (not the test-tube bunsen burner guy) that I pose these illustrations to emphasize that fact.

I'll be eighty years young March 3, 1961.

Sixty-two years Sept. 1, 1960 I entered Trinity Medical College, Toronto, Can., graduated May 30, 1902. Have been on assignments in Canada, U.S.A., Mexico, Europe and Africa.

I would have you know that I am interested in cooperating with Arizona Medicine. A writer can get several stories of first hand study, practice research and experience, I feel would prove invaluable to my profession. I do not fall for the impractical overtechnical. Neither do I like the sophistry running loose in the Press. I would suggest more true to life personal observations and work in very simple language with simple well interpreted art illustrations. It would interest me very much to give some time to a writer and illustrator visualizing.

The Folly Of Socialized Medicine
The Vital Issue in Medico Legal Cases
The Physician and Public Health
Ultra Basic Biological Research

Understand me. Of the Physician, by the Physician for the Physician.

JOHN R. C. CARTER, M.D.

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prescription for
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Buffered to control a normal vaginal pH. The new, improved P.A.F. formula now includes — sodium lauryl sulfate and alkyl aryl sulfonate, providing high surface detergent activity in acid and alkaline media. P.A.F.'s low surface tension increases penetration into the vaginal rugae and dissolution of organisms including trichomonas and fungus. P.A.F.'s high surface activity liquifies viscus mucus on vaginal mucosa, releasing accumulated debris in the vaginal tract. Non-irritating, non-staining, no offensive after-odor.

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DUKE R. GASKINS, M.D.
MEDICAL DIRECTOR

October 1, 1960

Re: Guaranteed Renewability

Dear Doctor:

We are happy to see that many of you Doctors are advocating all people should have hospital protection that is Guaranteed Renewable for Life.

We hope that you will continue to urge your patients to insist on having a Guaranteed Renewable for Life hospital policy.

The Hospital Benefit Assurance Plan is Guaranteed Renewable for Life and our policy-owners find this a most important feature. It means that as long as their premiums are paid on time and the policy has not lapsed, the Company can't put new restrictions on it, no matter how often they are hospitalized or for what reason within the provisions of the policy. Should they contract a long time illness, it is comforting to know they will receive full benefits from their hospital coverage that is Guaranteed Renewable.

Very truly yours,

Duke R. Gaskins, M. D.
Medical Director

DRG:rr

Offices in:

First at Willetta
Phoenix, Arizona
456 N. Country Club Dr.
Mesa, Arizona
31 N. Tucson Blvd.
Tucson, Arizona

In Memoriam

LEO J. KENT, M.D.

1913 - 1960

Dr. Leo J. Kent, internist, and a Tucsonian for the past 14 years, died June 5 of Hodgkin's disease. He had been prominent in Tucson medical and civic organizations and had continued a full practice until within a few days of his death.

Dr. Kent was born in Detroit, Mich. on August 13, 1913. He was a graduate of Northwestern University where he was a member of the varsity football team and the track team. He was a member of Northwestern's "N" Men's Club, Beta Theta Pi social fraternity and Nu Sigma Nu medical fraternity.

He received his M.D. degree from Northwestern Medical School in 1941 and served as intern and resident physician at Evanston Hospital.

During World War II, Dr. Kent served with



Leo J. Kent, M.D.

the U.S. Navy in the South Pacific for three years and was awarded the Purple Heart and the Distinguished Service Medal. Upon discharge he held the rank of Lieutenant Commander. He was presented with an Award of Merit by Northwestern as one of the two alumni who contributed most to the war effort.

Dr. Kent was instrumental in forming the Pima County Medical Legal Panel and was a member of the Pima County Medical Society Grievance Committee.

He was a past president of the Pima County Medical Society and was a member of the society's board of governors for the past six years. He had served as chairman of the Public Relations Board and as a member of the Legislative Committee for the Arizona Medical Association.

He was a charter member of the Medical Society of the United States and Mexico and also a member of the American Medical Association.

Dr. Kent was a past member of the board of directors of the Arizona Blue Cross and also a past member of the board of directors of the Tucson Chamber of Commerce. He had been a member of Tucson Rotary International and was a member of the Tucson Country Club. He served on the Citizens Committee for Hospital Planning in Tucson.

He had been honored with membership in Sigma Xi, national scientific fraternity, for his research on Dicumarol.

His wife, Bonita, resides at 4215 E. Cooper St., Tucson, with their daughter, Kathy Ann, and son, Tyler John. His mother, Mrs. Leopold A. Koscinski, and a sister, Mrs. Marion Carey, are both of Chicago.

Dr. Walter Hileman, 1959-60 president of the Pima County Medical Society, issued the following statement for the society:

"Dr. Kent's response to a grave disease with a known fatal prognosis was to all his colleagues a daily source of strength. His courageous fight, his devotion to his family and patients, his selfless service to the Pima County Medical Society and the Tucson community constitute a living memorial from which we may all be long inspired."

S. I. BLOOMHARDT, M.D.

1891 - 1960

With the passing of Dr. S. I. Bloomhardt, the medical profession has lost one of its oldest and most respected members and the community has lost a lovable and unusual personage. Si was born in Altoona, Pennsylvania, in 1891, took his premedical work at Gettysburg College and enrolled in the Medical School at the University of Pennsylvania in 1911, graduating in 1915. Soon after this, he enrolled with the University of Pennsylvania Overseas Detachment, which was to serve with the British and the French, since the United States had not joined in the World War at that time. He served over

twenty months, principally in base hospitals located fairly close to the front lines, however, and had considerable experience in the introduction of Cañrell-Dakin's solution for the treatment of infected wounds and was closely associated with the introduction of early skin grafting in war injuries.

At the end of the war he returned to Philadelphia and immediately became associated with the Orthopedic Department of the Graduate



Samuel I. Bloomhardt, M.D.

School of the University of Pennsylvania. He served as Assistant Surgeon, Pennsylvania Hospital, until 1922, as an Assistant at the Orthopedic Hospital in Germantown Hospital in 1922 and 1923, and was an instructor in the Graduate School at the University of Pennsylvania from 1921 to 1924.

Due to ill health, however, he was forced to relinquish his teaching positions and came to Arizona in search of his health.

A short time after he came to Phoenix, he be-

came associated with a pioneer physician, Dr. Robert W. Craig, whose daughter Kitty he subsequently married.

He continued his association with Dr. Craig until 1932, at which time Dr. Craig retired, and Dr. Bloomhardt moved into the recently completed Professional Building.

Although his practice of medicine was general in type, he had certain leanings toward orthopedic surgery as a result of his early training and became interested in industrial medicine as he began to develop the medical department of the Central Arizona Light and Power Company (now the Salt River Valley Project). He



Samuel I. Bloomhardt, M.D.

was keenly interested in all industrial medical problems, and was credited with the development of new and improved techniques for the treatment of electrical burns.

Dr. Bloomhardt was on the active staff of St. Joseph's and Good Samaritan Hospitals, and was President of the Maricopa County Medical Society in 1934. He took an active part in Society affairs, and made several presentations of papers and discussions, principally concerning industrial and surgical problems. When this country mobilized for war early in 1940, Dr. Bloomhardt was appointed to the Final Board of Appeal of the Draft Board, where he served with distinction during the war period, and indeed

up until the time he was forced to retire in 1955.

Although Dr. Bloomhardt enjoyed a large practice and was well and favorably known among his medical colleagues, he was probably better known for his interest in all affairs equestrian. Together with Dr. Luther Goodspeed, a dentist, Frank C. Brophy, George Judson and others, he organized the Westward Ho Riding and Polo Club, which was located on Missouri Avenue at Kay Drive. Here under the stimulus of this enthusiastic man, polo thrived for many years. He was also interested in arranging horse shows, breeding and training of race horses, and while spending the summer in Prescott, he organized a quadrille dance team on horseback which performed for several years.

This somewhat perfunctory account of Dr. Bloomhardt's accomplishments utterly fails to give any insight into the extraordinary character of this lovable if somewhat whimsical individual. On the polo field, he was a formidable and ruthless competitor, yet in his back yard he set aside a plot of ground as a burying place for his dogs, cats and canary birds. He enjoyed the society of the well-born and the well-placed, yet at the same time he was the personal physician to a coterie of ex-pugilists, broken-down jockeys, stable boys and rodeo performers. When he saw a poor unfortunate who needed some type of service which he himself could not perform, he did not hesitate to cajole one of his colleagues to apply a plaster cast and care for the patient. Animals, especially horses, were his life. Photographs of prize-winning horses were seen everywhere in his office, and indeed his office was decorated with a series of blue ribbons of prize-winning horses which he had bred and often exhibited himself.

One physician has summed up Si by saying "He was a lover of all mankind," which indeed he was. His one outstanding attribute was his unflinching kindness and sympathy for the underprivileged. He once remarked that he should have become a veterinarian, for horses were more appreciative than human beings. To this statement many of Dr. Bloomhardt's friends will take exception. They are sure that his underprivileged patients appreciated Si's kindness as much as did any horse, even a thoroughbred.

Topics of Current Medical Interest

Arizona Poisoning Control Information Center

TOXICITY OF HOUSEHOLD INSECTICIDES

Because of numerous recent telephone inquiries for information on the toxicity of various insecticidal products and in view of the common use of insecticides during this season, the Arizona Poisoning Control Information Center conducted a survey to examine the household and garden insecticidal preparations which are available in Tucson. It was anticipated that such a survey would provide information useful to our poisoning control program. The stores which were canvassed consisted of four super markets, two nurseries, a large drug store, and a variety store. It is believed that the 80 household and garden insecticidal items found in these stores are representative of those found throughout the state of Arizona. Besides the usual household and/or garden sprays and aerosols, garden dusts, and garden baits encountered in the survey, there were an insecticidal floor wax, two insecticide-treated shelf and lining papers, a fumigant-type lindane preparation, and two "coating" preparations which contain insecticides. The 80 products examined comprised 34 active insecticidal chemicals, in addition to the solvents and inert ingredients. The 12 most frequently observed active ingredients and their frequency of occurrence in the survey are listed in Table I.

Most of the products examined contain a combination of insecticides in low effective concentrations and are ready for use as purchased. Several of the garden dusts are ready for use as

Table I. The Frequency of Occurrence of Twelve Active Chemicals in Eighty Insecticidal Preparations

Frequency of Occurrence	Chemical
37	Pyrethrins (including Allethrin)
23	DDT
22	Piperonyl butoxide, Piperonyl cyclonene
18	Dieldrin
17	Methoxychlor
15	Lindane
15	Malathion
9	Rotenone
8	Beta butoxy beta thiocyanodiethyl ether
8	Captan
8	n-Octyl sulfoxide of isosafrole
8	Chlordane

purchased, but contain moderately high concentrations of insecticides. There are 20 garden sprays which require dilution with water before use; these contain high concentrations of insecticides. One of these concentrates contains as much as 72% chlordane.

In general the concentration of insecticides in the "ready-to-use" household and garden sprays is so low that ingestion of these products would give rise to poisoning by the petroleum distillate solvent rather than by the insecticides. Hence, in the event one of these preparations is ingested, treatment should be directed toward petroleum distillate poisoning. The insecticide-treated shelf and lining papers are unlikely to cause poisoning because of the physical nature of the preparations and because of the relatively

Table II. Toxicological Information on Eight Chemicals Employed in Concentrated Insecticidal Preparations 1, 2, 3, 4, 5

Insecticide	Toxicity* (Acute Oral)	Toxic Symptoms	Treatment
Chlordane	LD50** rat, 200-250 mg/kg (olive oil); LD50 rat, 250-750 mg/kg; Estimated human LD, 6-60 g; Skin contamination with 30 g; (25% solution) in organic solvent caused death.	Hyperexcitability, convulsions, tremors followed by depressions; death from respiratory arrest.	Phenobarbital sodium I.M. as prophylactic measure against convulsions; gastric lavage with water; catharsis with sodium sulfate; pentothal or pentobarbital I.V. to treat convulsions; oxygen or artificial respiration if needed; no specific antidote — symptomatic and supportive therapy with complete rest; avoid administration of fats, oils, and epinephrine; protect victim from external stimuli.
D.D.T. (Dichloro- diphenyl- trichloro- ethane)	LD50 rat, 150-200 mg/kg (veg. oil); LD50 rat, 200-800 mg/kg; Estimated human LD, 500 mg/kg; in kerosene, 150 mg/kg.	Same as chlordane.	Same as chlordane.
Dieldrin	LD50 rat, 40-100 mg/kg; Estimated human LD, 65 mg/kg.	Same as chlordane.	Same as chlordane.
Dimite (Di (p- chloro- phenyl) methyl carbinol)	LD50 rat, 500 mg/kg; Human LD, approximately same as for D.D.T.	Same as chlordane.	Same as chlordane.
Lindane	LD50 rat, 125 mg/kg; Estimated human LD, 7-15 g; convulsions with 45 mg in young adult reported.	Same as chlordane.	Same as chlordane.
Malathion	LD50 rat, 390-1500 mg/kg. (veg. oil); LD50 rat, 940-4700 mg/kg; Estimated human LD, 50-500 mg/kg; 4 g produced severe poisoning with recovery in 34-month-old boy.	Toxic symptoms primarily due to cholinesterase inhibition; headache; lacrimation; salivation; vomiting; dyspnea; diarrhea; marked tremors; pulmonary edema; convulsions.	Atropinize immediately; 1-4 mg atropine sulfate I.M. or I.V. for adult; maintain atropinization if cholinergic symptoms persist; frequent oropharyngeal suction as needed; oxygen and artificial respiration; gastric lavage with 5% sodium bicarbonate; wash contaminated skin with soap and water.
Nicotine	LD50 rat, 50-60 mg/kg; Estimated human LD, 60 mg; 4 mg produced grave symptoms.	G.I. irritation; tremors; convulsions; curare-like paralysis; death from respiratory failure.	Universal antidote, 6-8 tsp. in water; gastric lavage with 0.5% tannic acid or 1:5000 potassium permanganate; artificial respiration and oxygen; control convulsions with small doses of I.V. thiopental or pentobarbital; wash contaminated skin with soap and water.
Terpene Polychlori- nates (66% chlorine); (Toxaphene); (Chlorinated terpenes)	LD50 rat, 40-69 mg/kg; Estimated human LD, 2-7 g.	Same as chlordane.	Same as chlordane.

*Although the LD50 is useful for comparing relative lethal potency, it does not provide reliable information on the minimum toxic dose. The latter dose, which is the amount that will produce minimal toxic symptoms, may be a small fraction of the LD50.

**LD50 (Lethal Dose 50): dose calculated to kill fifty per cent of a population.

low concentrations of the insecticide on the papers. One of the papers examined contains 15 mg of lindane per square foot of paper and the other contains 19 mg of lindane per square foot of paper. In order to exhibit symptoms of poisoning from these lining papers one would have to consume the lindane from the surface of several square feet of the material. However, in the case of the fumigant product, the "coating" preparations, the garden dusts, and the garden spray concentrates, which contain moderately high to very high concentrations of insecticides, ingestion could readily result in insecticide poisoning from these products. Concentrated preparations of insecticides in an oil or lipid vehicle appear to be particularly hazardous because the lipid vehicle enhances gastrointestinal absorption and, thus, the toxicity of the pesticides (see TOXICITY, Table II).

In view of the toxicological hazards of some garden insecticidal preparations, especially the concentrated garden sprays, gardeners and home owners should be urged to follow directions carefully and to observe the precautions of the manufacturers in the application of these materials. They should also be reminded of the possible danger of pulmonary and cutaneous absorption of insecticides. Parents of young children, particularly, should be cautioned to keep these products locked and out of reach of their little ones.

To aid physicians in the evaluation, diagnosis, and treatment of insecticide poisoning cases, the Arizona Poisoning Control Information Center has compiled toxicological information on eight chemicals employed in concentrated insecticidal formulae examined in the survey. The tabulated information is presented in Table II.

Statistics of 116 Poisoning Cases in Arizona During June, 1960

AGE:

71.6% involved under 5 year group	(83)
6.0% involved 6 to 15 year age group	(7)
12.9% involved 16 to 20 year age group	((15)
6.9% involved 31 to 45 year age group	(8)
2.6% involved over 45 year age group	(3)

NATURE OF INCIDENT:

86.2% accidental	(100)
13.8% intentional	(16)

TIME OF DAY:

31.0% occurred between 6 a.m. and noon	(36)
21.6% occurred between noon and 6 p.m.	(25)
16.4% occurred between 6 p.m. and midnight	(19)
2.6% occurred between midnight and 6 a.m.	(3)
28.4% were not reported	(33)

OUTCOME:

98.3% recovery	(114)
1.7% fatal (aspirin, furniture polish)	(2)

CAUSATIVE AGENTS:

Internal Medicines		
	Number	Percent
Aspirin	21	18.1
Other Analgesics	3	2.6
Barbiturates	8	6.9
Antihistamines	4	3.5
Laxatives	3	2.6
Cough Medicine	1	.9
Tranquilizers	2	1.7
Others	10	8.6
Subtotal	52	44.9
External Medicines		
Liniment	0	0.0
Antiseptics	3	2.6
Others	0	0.0
Subtotal	3	2.6
Household Preparations		
Soaps, Detergents, etc.	5	4.3
Disinfectants	2	1.7
Bleach	8	6.9
Lye, corrosives, drain cleaners	6	5.2
Furniture and floor polish	4	3.5
Subtotal	25	21.6
Petroleum Distillates		
Kerosene	6	5.2
Gasoline	4	3.5
Others	2	1.7
Subtotal	12	10.4
Cosmetics		
Pesticides	1	0.9
Insecticides	6	5.2
Rodenticides	0	0.0
Others	0	0.0
Subtotal	6	5.2
Paints, Varnishes, Solvents, etc.		
Plants (Castor beans, Bird of Paradise)	4	3.5
Miscellaneous	2	1.7
Unspecified	5	4.3
	6	5.2
TOTAL	116	100.0

Willis R. Brewer, Ph.D.
Dean, College of Pharmacy
The University of Arizona
Tucson, Arizona

Albert L. Picchioni, Ph.D.
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Tucson, Arizona

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WHY A STATE DENTAL HEALTH PROGRAM

*Arizona State Department of Health
Chester S. Wachowski, D.D.S., M.P.H.*

It is estimated that the number of dentist-hours it would take to care for the accumulated dental needs in the United States reaches the staggering total of 768.5 million(1). To this is added 145.2 millions of dentist-hours which would be required to provide the services that are required to care for the incidence of dental disease occurring each year.

To meet these needs it is estimated that the dental profession can provide approximately 133.3 millions of dentist-hours. Actually, nationwide, the dental profession is hard-pressed to provide manhours about equal to the new need for services which develop as a result of the newly occurring dental diseases every year.

As a result of the topical fluoride demonstration conducted by the U.S.P.H.S. between May 1949 and May 1951, a sampling survey was made in ten Arizona counties visited by the unit (Table 1). The results stimulated the more progressive dentists of the Arizona State Dental Association into activity and their efforts achieved the appointment of a Director of Dental Public Health within the Arizona State Department of Health in October 1959. Until this date, Arizona had the somewhat dubious distinction of being the only state in the fifty states without a dental section in its department of health.

Since the organization of the first dental division of a state health department almost forty years ago, a long list of accomplishments in effective state dental programs could be cited.(2) A brief list of anticipated activities and needs for the Arizona State Department of Health will be reviewed.

SURVEYS

Obviously the first step in planning a state dental program is to determine the needs of the population. This can only be accomplished by conducting surveys of dental defects using such indices as are available. Intelligent program planning can hardly be carried on unless the nature and scope of a problem is accurately studied and analyzed. Interrelated surveys(3) must be conducted to determine resources available, both professional and non-professional, to meet the needs. Studies of dental-health knowledge, attitudes, and practices must be made

along with a determination of the blocks present to the solutions of the problem of providing real health.

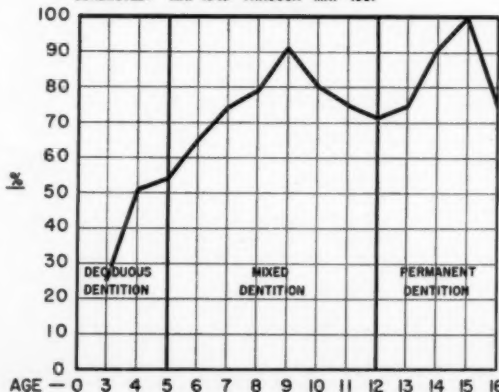
The needs and problems as non-dental people see them are usually and understandably at opposite ends of the pole. The dental profession knows that the only and most practical means of attaining better oral health is through prevention and education. The non-dental segments of the population can only think in terms of remedial care.

HEALTH EDUCATION

Health education is to be a principal and high priority activity of the State Dental Public Health program. It is important to create a desire for good oral health among a greater segment of the population and a willingness to seek and pay for more complete dental care. Again referring to Table 1, we see that only 22.3% of the children had previously been seen by a dentist. This is a sad commentary on the attitude of parents to the importance of early dental care when we see that 26.3% of the three year olds are in need of dental care. Referring to the graph Figure 1, we see that from the age of six and over more than 65% of the children are afflicted with dental problems.

Gallagan says, "What I have been trying to emphasize . . . is the fact that these children need a unique kind of help with their dental problems. All of these conditions are of such a nature that they need attention while the affected individual is still a child, while he is too young to make a decision or help himself achieve the health goals which he may have. If these conditions are allowed to go neglected until the

PERCENTAGE OF CHILDREN NEEDING DENTAL CARE, BY AGE GROUP
FROM: SAMPLING SURVEY OF TEN ARIZONA COUNTIES
CONDUCTED: MAY 1949 THROUGH MAY 1951



ARIZONA TOPICAL FLUORIDE DEMONSTRATION
MAY 1949 TO MAY 1951

SAMPLING SURVEY OF 10 COUNTIES VISITED BY UNIT

<u>TOTAL INSPECTED</u>	<u>TREATMENT COMPLETED</u>	<u>% OF TOTAL</u>	<u>3 TREATMENTS</u>	<u>%</u>	<u>2 TREATMENTS</u>	<u>%</u>	<u>1 TREATMENT</u>	<u>%</u>	<u>TREATED BUT NOT INSPECTED</u>
7131	6471	90.7	334	4.6	186	2.6	156	2.1	16

<u>TOTAL INSPECTED</u>	<u>WHITE</u>	<u>% OF TOTAL</u>	<u>COLORED</u>	<u>% OF TOTAL</u>	<u>OTHERS</u>	<u>% OF TOTAL</u>
7131	6798	95.3	187	2.6	146	2

<u>TOTAL INSPECTED</u>	<u>TOTAL DENTAL CARE NEEDED</u>	<u>% NEEDING DENTAL CARE</u>	<u>NUMBER INSPECTED PREVIOUSLY SEEN BY A DENTIST</u>	<u>% PREVIOUSLY SEEN BY A DENTIST</u>
7131	5312	74.4	1593	22.3

CHILDREN NEEDING DENTAL CARE BY RACE

<u>TOTAL INSPECTED</u>	<u>TOTAL NEED CARE</u>	<u>%</u>	<u>WHITE</u>			<u>COLORED</u>			<u>OTHERS</u>		
			<u>INSPECTED</u>	<u>NEED CARE</u>	<u>%</u>	<u>INSPECTED</u>	<u>NEED CARE</u>	<u>%</u>	<u>INSPECTED</u>	<u>NEED CARE</u>	<u>%</u>
7131	5312	74.4	6798	5032	74	187	145	77.5	146	135	92.4

DENTAL CARE NEEDED BY AGE GROUPS

<u>AGE</u>	<u>TOTAL INSPECTED</u>	<u>TOTAL NEED CARE</u>	<u>% OF TOTAL</u>
3	19	5	26.3%
4	43	22	51.1%
5	363	196	53.9%
6	1308	855	65.3%
7	1606	1194	74.3%
8	1527	1207	79. %
9	1095	900	92.1%
10	589	475	80.6%
11	314	240	76.4%
12	162	116	71.6%
13	71	53	74.6%
14	23	21	91.3%
15	15	15	100. %
16	4	3	75. %

FINDINGS ON INSPECTION

<u>TOTAL INSPECTED</u>	<u>TOTAL WITH PERMANENT TEETH EXTRACTED</u>	<u>%</u>	<u>TOTAL IN NEED OF PERMANENT TEETH EXTRACTION</u>		<u>FILLINGS PRESENT</u>		<u>DECIDUOUS</u>	<u>%</u>	<u>PERMANENT</u>		<u>BOTH</u>	<u>%</u>
			<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>			<u>%</u>	<u>%</u>		
7131	77	7.9	140	19.6	1865	26.1	1248	17.5	617	8.6	383	5.3

child can accept his own responsibility, the damage is done.

"Children do need fillings, and porcelain jackets and orthodontic appliances, but perhaps it is more realistic to say that what they really need is help from their elders. Many people who would choose to have good teeth are denied the right to make their own choice because their

teeth have been neglected during the critical years of childhood and adolescence. What is needed is a generation of adults — parents, teachers, public health workers — who will assume responsibility for seeing that the necessary preventive, educational and corrective dental services are available to them until they reach an age where they can make their own decisions about

the relative value of good dental health. If they are forced to wait that long without dental guidance, it may be too late!

"Parents are prime offenders, also too frequently, teachers do not have adequate information nor knowledge and lack the motivation to include dental health education in their classrooms. Dental health education in the curriculum of colleges and universities training teachers is seriously deficient."(4)

FLUORIDES

The problem of fluoride concentrations in the communal water supplies of the state is one that will require special attention.

A "Summary of the Chemical Analyses of Arizona Community Water Supplies" compiled in March 1960 by the Bureau of Sanitation and Sanitary Engineering and the Division of Laboratories of the Arizona State Department of Health points out some interesting facts. Our more than 1000 sources of community water supplies vary in fluoride concentrations from absolute 0 to 9, 10, and even 16. PPM.

In determining optimum fluoride concentrations to attain maximum benefits and little or no cosmetic defects, a few variables must be taken into consideration. Studies made by Galagan and Vermillion(5) and Galagan and Lamson (6) have pointed out that climate is an important factor in ascertaining the recommended optimum fluoride concentrations. As the mean maximum annual temperature increases the needed concentration of the fluoride ion in the water supply decreases.

Children vary in their activities and a youngster who is very active in the heat of the day will drink much more water and as a result ingest a greater relative amount of fluoride.

Dietary habits and cultural customs of certain population groups will result in a greater ingestion of fluoride ions. Studies made in New Mexico by Striffler(7) show that the Spanish American group who customarily boil their beans for hours concentrate the fluorides in foods to a much higher degree. Topical application of fluoride, though less effective than fluoridation of community water, is the preventive method of choice for children living in areas where fluoride concentrations in water are either too low to be beneficial or entirely absent. Evidence shows that where the applications have been carried on properly and over the recommended

periods of time (at ages 3, 7, 10 and 13) there is a statistically significant decrease in the incidence of dental caries of approximately 40%. Granted this is a cumbersome and expensive procedure when carried out in the dental offices, but only a small percentage of children receive these treatments. There are no organized community programs to provide this service.

Daily administration of 5 mg fluoride tablets, a recommended procedure in some instances, has its drawbacks. Religious adherence to a prescribed dosage of medicine, tonics, vitamins or what have you cannot be depended upon as the members of the medical profession well know. Again we have here the ever-present threat of a parent who feels if a little bit is good, a lot is better, and will give a youngster twice as much as the recommended dosage in the hopes of eliminating dental caries entirely. It is a good thing that lethal doses are extremely high or they might even eliminate the child.

Much remains to be done in this field and with the co-operation of the Bureau of Environmental Sanitation and the Division of Laboratories of the Arizona State Department of Health, it is hoped to make some progress. It might be well to mention at this time that copies of the "Summary of Arizona Water Supplies" are available upon request from the Arizona State Department of Health.

These are just a few of the areas of program operations.

FUNDS AND PERSONNEL

We are all aware that funds appropriated for the Arizona State Department of Health are hardly adequate to carry on a satisfactory, overall program. All Divisions are short in personnel and budgetary allowances.

The Dental Public Health program is no exception, however, with the wholehearted assistance of the Arizona State Dental Association and the increasing awareness of the medical profession that dental care is a basic health need, it is felt reasonable progress will be made. We earnestly solicit the continued assistance of the medical profession in our efforts to resolve these problems. Through a system of appointing local dentists as consultants to the Dental Director, many of the problems of lack of personnel will be solved. These consultants will be asked to conduct surveys, work with local health departments, give talks to P.T.A. groups, civic organi-

zations and serve as a staff member of the Dental Public Health program.

To date over one hundred members of the State Dental Association have indicated a willingness to act as consultants, without remuneration, to the Arizona State Department of Health's Dental program.

It is a foregone conclusion that the knowledge gained from medical and dental research must be applied to be useful. There is now more basic knowledge about the prevention of dental diseases than is being applied through dental public health programs. It will be the duty of the Dental Public Health program and its director, with the assistance of his consultants, to stimulate the individual, the family and the community to make use of this knowledge to improve the oral health of the people of Arizona.

REFERENCES

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5. Donald J. Galagan, D.D.S., M.P.H. and Jack R. Vermillion, M.P.H. Determining Optimum Fluoride Concentrations. Public Health Reports, Vol. 72, PP 491-493, June 1957.
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7. David Striffler, D.D.S., M.P.H.—Personal Communications, 1959.

BOARD OF MEDICAL EXAMINERS STATE OF ARIZONA

1021 Central Towers Building
Phoenix, Arizona

The Board of Medical Examiners of the State of Arizona at a regular meeting held Saturday, July 16, 1960, issued certificates to practice medicine and surgery in this State to the following doctors of medicine:

BECKMEYER, William Joseph (Pd), 926 E. McDowell Road, Phoenix, Arizona.

BEHLKE, Frank Marvin (S), 1603 N. Tucson Blvd., Tucson, Arizona.

BOIKO, George (S), 601 North 4th Avenue, San Manuel, Arizona.

BURR, Henry Leonard (S), 14103 E. Jefferson Ave., Detroit 15, Mich.

CLARY, Rudolph I. (GS), 216-18 South Front, Clagiac, Michigan.

CLAYTON, Bruce Turner (GP), 2919 North 56th Street, Phoenix, Arizona.

CRANDALL, John Ivan (GP), San Manuel Hospital, San Manuel, Arizona.

CRAWFORD, Robert Fielding (Pd), 4950 East Thomas Road, Phoenix, Arizona.

CREPEA, Seymour Bernard (I-A), University Hospital, Madison, Wisconsin.

DARTY, Warren Gamaliel (GP), 512 - 9th Avenue, Palmetto, Florida.

DAVIS, Donald Andrew (GP), 2828 Westward Boulevard, Phoenix, Arizona.

DI CENSO, Remo (P), 1031 South Broadway, Los Angeles, Calif.

DORFMAN, Malcolm Francis (Or-S), 4660 E. Rockridge Road, Phoenix, Arizona.

DORSEY, George Charles (GP-PN), 720 Marq Bank Building, Minneapolis, Minn.

ENGLUND, Philip Martin (I), Ray Hospital, Ray, Arizona.

EPISCOPO, Frank Ronald (GP), Humboldt County Hospital, Eureka, Calif.

FLYNN, Stephen Eugene, Jr. (S), Maricopa County Hospital, Phoenix, Arizona.

FRAZIN, Lawrence Norman (Oph), 1130 East McDowell Road, Phoenix, Arizona.

GANEM, John Ferris (GM), Sunnyslope Clinic, Sunnyslope, Arizona.

GORDER, William Elnathan (GP), Box 1127, Aberdeen, South Dakota.

GRENFELL, Nicholas Pirie, Jr. (Path), Maricopa County General Hosp., Phoenix, Arizona.

GROSSMAN, Raymond (GP), Arizona State Hospital, Phoenix, Arizona.

HULEN, William Laverne (GP), 710 Professional Bldg., Phoenix, Arizona.

JOHNSON, Gordon Craig (R), M. D. Anderson Hospital, Houston, Texas.

JOHNSON, John James, Jr. (GP), 720 University Avenue, Las Vegas, New Mexico.

KESKEY, Theodore John (OALR), 205 West Coolidge St., Ironwood, Michigan.

KUYKENDALL, James Wayne (Ob-Gyn), Craycroft Medical Center, Tucson, Arizona.

LEE, Donald Edward (Ob-Gyn), 2955 North 22nd Avenue, Phoenix, Arizona.

McCREA, John Weed (GP), 6417 East Marlette St., Marlette, Michigan.

MEHNE, Edwin Karl (S), Sage Memorial Hospital, Ganado, Arizona.

ERMIS, William Leo (I-A), 1597 Mahoning Avenue, Youngstown, Ohio.

MINTURN, William Oliver (GS-TS), Veterans Administration, Phoenix, Arizona.

MORTIMER, Harold Montgomery (GP), 720 University Avenue, Las Vegas, New Mexico.

MOULDING, Thomas Staver, Jr. (I), Many Farms Clinic, Chinle, Arizona.

NASON, Zacharia Miles (GM & S), 771 Brotherhood Bldg., Kansas City, Kansas.

NAU, Carl August, Jr. (Anes), 2021 North Central Avenue, Phoenix, Arizona.

NICHOLSON, Hiram Adelbert (Ob-Gyn), 18941 Kingsville, Harper Woods, Michigan.

NOLEN, Percy (GP), West Blocton, Alabama.

PENT, David (Ob-Gyn), 2021 North Central Avenue, Phoenix, Arizona.

RABBAN, Wilson Joseph (Ob-Gyn), Kern County General Hospital, Bakersfield, Calif.

RADL, Robert Bernard (A), Santa Cruz County, Hospital, Santa Cruz, California.

REGER, Harry Leo, Jr. (GP), 6838 North 23rd Avenue, Phoenix, Arizona.

REUSS, Phyllis Sydney (GP), Maricopa County Health Dept., Phoenix, Arizona.

RUBINOW, Leo (P), Arizona State Hospital, Phoenix, Arizona.

SHAW, Larry Dale (GP), 694 East Southern Ave., Phoenix, Arizona.

SIEVERS, Maurice Lathan (I), 1550 E. Indian School Rd., Phoenix, Arizona.

SMIDT, James Allen (Pd), 322 West McDowell Road, Phoenix, Arizona.

STAVIG, Paul Hjertaas (Ob-Gyn), USAF Hospital, Homestead AFB, Florida.

STEELE, William Marker (Or-S), 24 North Hibbert Street, Mesa, Arizona.

STEVENSON, Walter Davis, Jr. (Oph), 1124 Broadway, Quincy, Illinois.

THEISEN, Richard Bruce (Ob-Gyn), 1150 North Country Club Drive, Mesa, Arizona.

TRAUMANN, Henry (GP), 3410 Monroe Street, Madison, Wisconsin.

VENROSE, Robert James (GP), 9939 Memory Park Avenue, Sepulveda, California.

VIARD, Walter Sloan, Jr. (GP), 450 West 23rd Street, Yuma, Arizona.

WHALEY, Joseph Sexter (GP), USAF Dispensary, Wurtsmith AFB, Oscoda, Michigan.

MEDICAL SUPPLEMENT, HARPER'S MAGAZINE

"The Crisis in American Medicine," a 48-page special supplement is appearing in the October issue of Harper's Magazine.

The issue carries articles by Edward T. Chase on "The Politics of Medicine"; Selig Greenberg

on "The Decline of the Healing Art"; Joseph Fletcher, of the Episcopal Theological School, on "The Patient's Right to Die."

Also Dr. David Rutstein, of the Harvard Medical School on "Do You Really Want a Family Doctor?" Dr. Lindsay E. Beaton, President of the Arizona Medical Association, on "A Doctor Prescribes for His Profession"; John Russell on "The Hidden Bottleneck in Medical Research."

Also Dr. Martin Cherkasky and Maya Pines on "Tomorrow's Hospitals"; and Dr. Rene J. Dubos on "Beyond Traditional Medicine."

The Editors of Harpers, writing in the introduction to the supplement, believe that "the articles will offer a basis for informed debate on questions which the country will have to settle before long, because they affect the health, and perhaps the lives, of all of us."

NEW APPOINTMENT FOR CARRERAS

Dr. M. A. Carreras of Tucson has been appointed co-chairman of the health committee of the Arizona-Mexico West Coast Trade Commission by Gov. Paul Fannin. The other chairman of the health committee is Dr. Guillermo Sobranes of Hermosillo.

The commission is concerned with broad objectives covering most of the economic areas that involve exchanges between the two states.

PRIMARY SOURCES IN MEDICINE REISSUED

The pressure of keeping up with the mass of new materials has too often caused members of the profession to neglect older and basic sources. Recognizing this neglect, three classes of medical history have been reissued by Dover Publications.

A *Source Book in Medical History*, compiled by Logan Clendenning (\$2.75) offers a panoramic view of the development of modern medicine through the contributions of men who made medical history. An anthology of the most significant medical writings of 4000 years, this volume covers every area of medicine from the theories of the early Egyptians to Roentgen's discovery of the x-ray. The 124 papers by 120 authors are documented with critical and biographical notes by the editor.

Twelve papers that revolutionized medical science have been brought together in C. N. B.

Camac's *Classics of Medicine and Surgery* (\$2.25). These are the papers, by eminent physicians from Harvey to Holmes, that laid the foundations for modern medical theory and practice. Included in this collection are papers by Lister on "The Antiseptic Principle of the Practice of Surgery," Auenbrugger on "percussion of the Chest," Jenner on the small pox vaccine, Morton on "The Physiology of Ether" and others.

Third is William Beaumont's famous study on the mechanism of digestion, *Experiments and Observations on the Gastric Juice and the Physiology of Digestion* (\$1.50). Beaumont's work with Alexis St. Martin remains a unique landmark in man's knowledge of his body processes.

In order to continue issuing quality editions of works in medicine at reasonable prices, Dover Publications would welcome suggestions on important, but often unavailable or out-of-print books for republication. The senders of the first 100 suggestions received by the publisher will receive, free of charge, their choice of any book on Dover's extensive list.

LABELING OF PRESCRIPTION DRUGS

Stronger regulations to insure that physicians receive adequate information about the drugs they prescribe and to insure the safety of new drugs were proposed by the Food and Drug Administration.

The new regulations would:

(1) Require sweeping changes in the labeling of prescription drugs. Virtually all prescription drug packages and printed matter distributed to physicians to promote sale of a drug would be required to bear complete information for professional use of the drug, including information about any hazards, side effects or necessary precautions.

FDA said that heretofore such fully detailed information has not been required in labeling when it was available in scientific literature, or, in certain cases, was available to the physician

upon request. The only exception in the proposed regulations would apply to frequently used medicines that are commonly familiar to the doctor.

(2) Provide that when safety requires, a new drug would be kept off the market until the manufacturer's representations regarding the reliability of manufacturing methods, facilities and controls have been confirmed by a factory inspection by the Food and Drug Administration.

Such an inspection would verify that the firm can insure the identity, strength, quality and purity of each batch of the drug, FDA said. Occasional inspections have shown conditions in manufacturing plants which were contrary to representations made by the manufacturer in his request for safety clearance, according to FDA.

Other proposed labeling changes would require drugs for injection and for use in the eyes to bear a quantitative declaration of all inactive ingredients. Labels of all prescription drugs would be required to include an "identifying lot or control number from which it is possible to determine the complete manufacturing history of the drug." Exemptions are permitted where there is sufficient label space provided the information is given on other parts of the drug package. All labeling bearing information for use of a drug would be required to have the date of its issuance.

FEDERAL EMPLOYEES HEALTH BENEFITS

The total of employee payroll deductions and Government contributions for the Federal employees health benefits program, which went into effect in July, is estimated at \$300,000,000 a year, the Civil Service Commission announced. Of this total, enrolled employees will pay about 62 percent, or \$186,000,000, and employing agencies will pay the remainder, or \$115,000,000.

The estimate is based on registration figures reported as of August 1 by the carriers of participating health benefits plans. These figures

		% Total Enroll- ment	% High Option	% Low Option
Government-wide Service Benefit Plan	943,377	54%	82%	18%
Government-wide Indemnity Benefits Plant	495,385	27%	82%	18%
Employee Organization Plans	229,079	13%	68%	32%
Comprehensive Medical Plans	100,987	6%	93%	7%
Total	1,738,828	100%	81%	19%

show a total employee enrollment of 1,738,828. They break down as follows:

According to preliminary figures, about 90 percent of all eligible employees are covered by the program. Eighty-one percent of the enrolled employees selected the high and more expensive options, although the low and less expensive options generally offer benefits comparable to, or better than, the benefits of most plans in which employees had been enrolled prior to the new program. The legislative history and the provisions of the Federal Employees Health Benefits Act of 1959 indicate that it was the intent of Congress to offer Federal employees an opportunity to obtain more extensive health benefits coverage than was previously generally available to them, the Commission said. The overwhelming selection of the high options shows that Federal workers agree with this intent and are more interested in broad coverage than in minimum protection at a lower cost.

In the area of broader application of the bene-

fits, all participating plans permit an enrolled employee to retain full coverage for himself and his family after his retirement at the same cost as for the active employee. Full coverage of dependents may continue after the death of an enrolled employee or annuitant at the same cost as for active employees. Employees in a nonpay status may be covered for up to 365 days without premium cost to the employee or the Government during that time. No plan excludes an eligible employee from enrollment for reasons of pre-existing physical or mental conditions, age, or hazardous occupations.

Tabulations are currently being processed to relate the exercise of employee choice under this program to such items as salary, geographic area, family composition, and existing coverage under other plans. Analysis of the results of these tabulations is expected to provide further evaluation of the significance of the enrollment of Federal employees to the health insurance field generally, the Commission said.

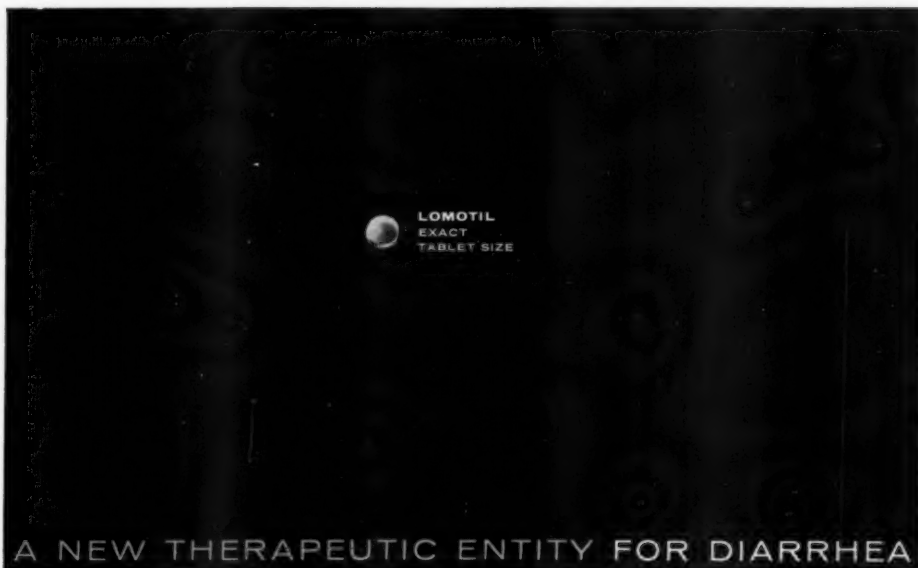
ENROLLMENT FIGURES RECEIVED FROM PARTICIPATING CARRIERS AS OF AUGUST 1, 196

EMPLOYEE ORGANIZATION PLANS

National Association of Letter Carriers	101,503
National Federation of Post Office Clerks	31,600
National Postal Clerks Union	17,350
American Federation of Government Employees	17,072
National Rural Carriers Association	16,372
Federal Postal Hospital Association	12,887
Special Agents Mutual Benefit Association (F.B.I.)	10,598
American Foreign Service Protective Association	5,136
National League of Postmasters of the United States	4,773
United National Association of Post Office Craftsmen	4,205
Group Health Insurance Board (Panama Canal)	3,091
National Association of Post Office and General Services Maintenance Employees	2,867
National Federation of Post Office Motor Vehicle Employees	1,825
TOTAL.....	229,079

COMPREHENSIVE MEDICAL PLANS

Kaiser Foundation Health Plan, Inc., San Francisco, Calif.	25,792
Kaiser Foundation Health Plan, Inc., Los Angeles, Calif.	17,160
Hawaii Medical Service Association, Honolulu, Hawaii	9,714
Group Health Association, Inc., Washington, D. C.	9,500
Washington Physicians Service, Seattle, Wash.	6,557
Kaiser Foundation Health Plan, Inc., Honolulu, Hawaii	6,193
Health Insurance Plan of Greater New York	5,500
Group Health Insurance, Inc., New York, N. Y.	4,535
National Hospital Association, Portland, Ore.	3,421
California Counties Medical Societies' Foundation for Medical Care, Stockton, Calif.	2,987
Kaiser Foundation Health Plan of Oregon, Portland, Ore.	2,803
Physicians and Surgeons Association, San Francisco, Calif.	2,404
Group Health Cooperative of Puget Sound, Seattle, Wash.	2,390
Ross-Loos Medical Group, Los Angeles, Calif.	654
Seattle Letter Carriers Medical Service, Inc., Seattle, Wash.	648
Western Clinic, Tacoma, Wash.	187
Group Health Plan, Inc., St. Paul, Minn.	184
Pacific Health Plan, Los Angeles, Calif.	146
North Idaho District Medical Service Bureau, Inc., Lewiston, Idaho	120
The Bridge Clinic, Seattle, Washington	66
Ray E. Harris, M.D., and Staff, San Francisco, Calif.	35
TOTAL.....	100,987



LOMOTIL[®]

SELECTIVELY LOWERS PROPULSIVE MOTILITY

LOMOTIL represents a major advance over the opium derivatives in controlling the propulsive hypermotility occurring in diarrhea.

Precise quantitative pharmacologic studies demonstrate that Lomotil controls intestinal propulsion in approximately $\frac{1}{11}$ the dosage of morphine and $\frac{1}{50}$ the dosage of atropine and that therapeutic doses of Lomotil produce few or none of the diffuse untoward effects of these agents.

Clinical experience in 1,314 patients amply supports these findings. Even in such a severe test of antidiarrheal effectiveness as the colonic hyperactivity in patients with colectomy, Lomotil is effective in significantly slowing the fecal stream.

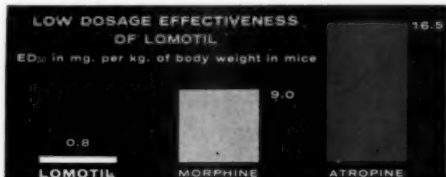
Whenever a paregoric-like action is indicated, Lomotil now offers positive antidiarrheal control... with safety and greater convenience. In addition,

as a nonrefillable prescription product, Lomotil offers the physician full control of his patients' medication.

PRECAUTION: While it is necessary to classify Lomotil as a narcotic, no instance of addiction has been encountered in patients taking therapeutic doses. The abuse liability of Lomotil is comparable with that of codeine. Patients have taken therapeutic doses of Lomotil daily for as long as 300 days without showing withdrawal symptoms, even when challenged with nalorphine.

Recommended dosages should not be exceeded.

DOSAGE: The recommended initial dosage for adults is two tablets (5 mg.) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is supplied as unscored, uncoated white tablets of 2.5 mg., each containing 0.025 mg. ($\frac{1}{4000}$ gr.) of atropine sulfate to discourage deliberate overdosage.



EFFICACY AND SAFETY of Lomotil are indicated by its low median effective dose. As measured by inhibition of charcoal propulsion in mice, Lomotil was effective in about $\frac{1}{11}$ the dosage of morphine hydrochloride and in about $\frac{1}{50}$ the dosage of atropine sulfate.

Subject to Federal Narcotic Law.

Descriptive literature and directions for use available in Physicians' New Product Brochure No. 81 from

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Reprints

Chemotherapy Of Extrapulmonary Tuberculosis In Adults*

The treatment of extrapulmonary tuberculosis follows the general principles of chemotherapy used in the management of pulmonary tuberculosis. A suggested outline for chemotherapy is given. Prolonged treatment and a delay in instituting surgical measures are recommended.

The management of pulmonary tuberculosis varies considerably to meet problems of individual cases, but the following general principles of chemotherapy, which are widely followed, are also believed to apply to many forms of extrapulmonary tuberculosis:

1. Antibacterial chemotherapy is recommended for all patients with active tuberculous infection.

2. Chemotherapy should be intensive and uninterrupted. Most physicians, but not all advise combined chemotherapy, using isoniazid with either PAS or streptomycin. When it is well tolerated, PAS is usually employed because it is easily administered. Some physicians prefer to use three drugs — isoniazid, PAS, and streptomycin — for more severe manifestations of tuberculosis. The usual dosage of isoniazid is 100 mg. three times daily (3-5 mg. per kilo body weight), but there is growing indication that larger doses are sometimes more beneficial. Larger doses require the administration of pyridoxine to minimize the risk of neurologic complications (peripheral neuritis), PAS is given

in maximal tolerated doses, ordinarily 4 gm. three times daily (150-200 mg. per kilo body weight). Daily administration of streptomycin — 1.0 gm. (15-20 mg. per kilo body weight) — is ordinarily reserved for severe manifestations of tuberculosis, and injections every second or third day appear adequate for many cases.

3. Chemotherapy is continued for a prolonged period — usually two years and at least one year — after the tuberculosis has become inactive, as determined by X-ray, bacteriologic, and clinical diagnostic methods.

4. Surgical treatment for pulmonary tuberculosis, particularly pulmonary resection, is ordinarily delayed for at least several months. This long preliminary course of medical treatment sometimes obviates the need for surgery, usually diminishes the risk of tuberculosis complications of surgery, and sometimes permits more conservative operations than would have been necessary earlier in the course of the illness. At other times lesions that appear to be inoperable improve substantially as a result of medical treatment and become operable. In some forms of extrapulmonary tuberculosis, it is probable that surgery, particularly the radical procedures,

*A Statement of the Committee on Therapy, American Trudeau Society, The American Review of Respiratory Diseases, March, 1960.

should be similarly delayed for several months after medical treatment is begun.

Skeletal Tuberculosis

When affected by tuberculosis, a weight-bearing joint is more likely to require surgical fixation than a non-weight-bearing joint. Peripheral joints heal more rapidly and completely than proximal joints. Joints of the spine are more difficult to treat than joints of the extremities.

Tuberculosis which involves only the synovial membrane is often completely reversible, and a functional cure is usually possible with chemotherapy. Early diagnosis of such a condition may require biopsy.

The fusion of tuberculosis joints is best delayed until medical treatment has diminished soft tissue reaction, closed any drainage sinuses present, and stabilized the pathologic process, and may be avoided altogether in many instances.

Tuberculous abscesses should be evacuated when possible to facilitate healing.

Tuberculous Lymphadenitis

Tuberculous lymph nodes often resolve rather slowly under treatment with specific drugs, but eventual healing is usually possible without surgery. Abscesses associated with tuberculous lymph nodes should be evacuated (aspirated) and occasionally resected. Acid-fast bacilli that are not typical *M. tuberculosis* are occasionally found to cause lymphadenitis. These organisms are usually not responsive to antituberculosis drugs.

Genitourinary Trace Tuberculosis

Tuberculous cystitis responds promptly when the infection is recent and superficial. Despite early clearing of symptoms of cystitis, prolonged treatment is essential for permanent results.

Renal tuberculosis demands prolonged medical treatment in all cases — for even longer periods than in the case of pulmonary diseases — and results are frequently satisfactory, even without resection of seriously damaged kidneys. Opinion among surgeons is divided as to what constitutes an indication for nephrectomy.

Tuberculous epididymitis, seminal vesiculitis, and prostatitis respond slowly but definitely to adequate and prolonged chemotherapy.

Tuberculosis of the female genital tract frequently requires surgery in addition to chemotherapy, especially removal of the abscesses associated with tuberculous salpingitis. Tuberculosis of the endometrium is usually secondary to tuberculosis elsewhere in the genital tract but appears to respond to medical treatment.

Miliary Tuberculosis And Tuberculous Meningitis

These forms of tuberculosis may frequently be treated successfully, especially when early, intensive, and prolonged therapy is administered. Isoniazid is considered the most important drug. Streptomycin is usually employed daily for a few weeks or months. There is growing evidence that the adrenal corticosteroid hormones are beneficial. Intrathecal therapy is rarely used in the treatment of tuberculous meningitis.

COMMITTEE ON THERAPY American Trudeau Society

Thomas B. Barnett, M.D.
Edward Dunner, M.D.
H. Corwin Hinshaw, M.D.
Gardner Middlebrook, M.D.
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A LOGICAL ADJUNCT TO THE WEIGHT-REDUCING REGIMEN

meprobamate **plus** d-amphetamine...
reduces appetite...elevates mood...eases
tensions of dieting...**without** overstimulation,
insomnia or barbiturate hangover.

Dosage: One tablet one-half to one hour before each meal.

anorectic-ataractic

BAMADEx

meprobamate 400 mg., with d-amphetamine sulfate 5 mg., Tablets

Ludlow

*Future Medical Meetings
and Postgraduate Education*

Sociedad Medica de Estados
Unidas de Norteamerica y Mexico

FIFTH ANNUAL MEETING

Guadalajara, Jal., Mexico, November 8-9-10;
followed by Mazatlan, Sin., Mexico, November
11-12. For information write: M. A. Carreras,
M.D., 130 South Scott, Tucson, Arizona.

**THE EIGHTH ANNUAL SCIENTIFIC
SESSION OF THE ARIZONA
CHAPTER AMERICAN ACADEMY
OF GENERAL PRACTICE**

OCTOBER 13, 14, 15, 1960
Hotel Valley Ho, Scottsdale, Arizona
All Physicians Cordially Invited

PROGRAM
THURSDAY, OCTOBER 13
1:30 - 5:00 P.M.

"The Role of Professional Management"
Speaker, Mr. Edward W. Rice, Doctors' Business Bureau, Boise, Idaho.
"The Doctor's Accountant"
Speaker, Mr. Gary Wade, Doctors' Business Bureau, Tucson, Arizona.
"Paying for Medical Care"
Speaker, Mr. George Richardson, Medical-Dental-Finance Bureau, Phoenix, Arizona.

FRIDAY, OCTOBER 14
9 - 12:00 A.M.

Urology Clinic

"The Use and Abuse of Catheters"
"Urologic Conditions that Simulate General Surgical Conditions in the Abdomen"
Speaker, David K. Worgan, M.D., Seattle, Washington.
Discussant: Paul L. Singer, M.D., Phoenix.

FRIDAY, OCTOBER 14
2-5:00 P.M.

Psychosomatic Clinic

"Psychosomatic Medicine In General Practice"
Speaker, Edward J. Kollar, M.D., The Neuropsychiatric Institute, UCLA.
Discussant: William B. McGrath, M.D., Phoenix.

SATURDAY, OCTOBER 15
9 - 12:00 A.M.

Burn Clinic

"Burn Management"
Speaker, Edward N. Vogel, Jr., M.D., Col. MC Brooke Army Hospital.
Discussant: Claire W. Johnson, M.D., Phoenix.

REGISTRATION

These meetings open to all doctors.
Make reservations directly with Hotel.

ANNUAL MEETING:

Luncheon, 12:15, October 14.

ENTERTAINMENT:

Ladies Luncheon, Friday, October 14, 1 p.m.
Cocktail Party Friday, October 14, 6:30 p.m.
Buffet Dinner, 7:30.

ARIZONA HEART ASSOCIATION**Letter of Invitation**

Dear Doctor:

Again this year we take pride in announcing our Fourth Annual Cardiac Conference to be held in Phoenix, Arizona on January 29 and 30 at the Arizona Biltmore Hotel.

If you were with us last January you will recall that this hotel has excellent facilities for our conference.

The distinguished speakers for the next symposium include the following:

Paul Dudley White, M.D., Clinical Professor of Medicine, Harvard Medical School, Boston, Mass.

Robert E. Gross, M.D., Lab. Professor of Children's Surgery, Harvard Medical School, Boston, Mass.

W. Proctor Harvey, M.D., Associate Professor of Medicine, Department of Internal Medicine, University of Kansas; presently Director of the Institute for Cardiopulmonary Diseases at Scripps Clinic and Research Foundation, LaJolla, California.

We are most sincere in our desire that you will give serious consideration to the combination of a vacation in this valley and an attendance at this unusually fine scientific program.

A golf course and riding stables are on the hotel grounds. Plan your winter vacation now and be with us in January.

Sincerely yours,

Leslie B. Smith, M.D.

Chairman

1961 Symposium Planning Committee

revised 8-4-60

Tentative Program

9TH ANNUAL CANCER SEMINAR

of the Arizona Division

American Cancer Society

"Changing Concepts in Tumor Formation and Therapy"

January 12, 13 & 14, 1961

Tidelands Motor Inn - Tucson

Thursday, January 12

9:00 A.M. Greetings—Dr. Lindsay E. Beaton
President, The Arizona Medical Association

9:15 A.M. *Some Metabolic Approaches to Cancer Chemotherapy - Part I*
Arnold D. Welch, Ph.D., M.D.

9:45 A.M. *Theoretical Aspects of Immunology*
Chester M. Southam, M.D.

10:30 A.M. Break

10:45 A.M. *The Polyoma Story*
Arthur W. Ham, M.B.

11:15 A.M. *Diagnostic and Therapeutic Studies on Cancer of the Adrenal*

Roy Hertz, M.D.

12:00 Noon Luncheon and Round Table

2:00 P.M. *The Use of Limited Surgery and Maintenance Chemotherapy for the Management of Certain "Inoperable" Tumors*

Jeanne C. Bateman, M.D.



Charles Heidelberg, Ph.D.



Henry S. Kaplan, M.D.



Roy Hertz, M.D.

2:30 P.M. *Laboratory Studies in Cancer
Chemotherapy with Fluorinated
Pyrimidines*

Charles Heidelberger, Ph.D.

3:00 P.M. Break

3:15 P.M. *Bone Pathology*

C. Howard Hatcher, M.D.

3:45 P.M. Question and Answer Session

Friday, January 13

9:15 A.M. *Assessment of Environmental
Agents in the Pathogenesis of
Lung Cancer...* Paul Kotin, M.D.

9:45 A.M. *Indirect Mechanisms in Carcino-
genesis* .. Henry S. Kaplan, M.D.

10:15 A.M. Break

10:30 A.M. *Some Metabolic Approaches to
Cancer Chemotherapy — Part II*
Arnold D. Welch, Ph.D., M.D.

11:15 A.M. *Chemotherapy of Choriocarcino-
ma and Related Trophoblastic
Tumors.....* Roy Hertz, M.D.

12:00 Noon Luncheon

1:30 P.M. *Treatment of Bone Tumors*
C. Howard Hatcher, M.D.

2:00 P.M. *The Treatment of Advanced
Tumors.* Jeanne C. Bateman, M.D.

2:30 P.M. Break

2:45-4:00 P.M. Panel: *Care of the Patient
with Advanced Malignance*

Jeanne C. Bateman, M.D. Roy Hertz, M.D.
Charles Heidelberger, Ph.D., Henry S. Kaplan,
M.D., plus clergy and two clinicians

Saturday, January 14

9:15 A.M. *Clinical Pharmacology Studies
with Fluorinated Pyrimidines*
Charles Heidelberger, Ph.D.

9:45 A.M. *Immunology As It Relates to
Cancer: Clinical Applications —
Past Attempts and Future
Possibilities*
Chester M. Southam, M.D.

10:15 A.M. Break

10:30 A.M. *Host Factors in Relation to the
Action of Environmental Carci-
nogenic Agents.* Paul Kotin, M.D.

11:00 A.M. *Chemical Modification of Radio-
sensitivity.* Henry S. Kaplan, M.D.

11:30 A.M. *Possible Tumor Viruses in Man*
Arthur W. Ham, M.B.

POSTGRADUATE COURSES ON DISEASES OF THE CHEST

Two postgraduate courses on diseases of the chest have been announced by Dr. J. Winthrop Peabody, Sr., Washington, D.C., Chairman of the Council on Postgraduate Medical Education of the American College of Chest Physicians.

The first of these, the 15th annual course, **CLINICAL CARDIOPULMONARY PHYSIOLOGY**, has been arranged under the co-chairmanship of Dr. Albert H. Andrews, Associate Clinical Professor of Bronchoesophagology, University of Illinois College of Medicine, and Dr. Edwin R. Levine, Assistant Professor of Clinical Medicine, Chicago Medical School. This course will be held at the Sheraton Towers Hotel, Chicago, October 24-28, 1960.

The second, the 12th annual course, **RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE HEART AND LUNGS**, was arranged under the co-chairmanship of Dr. Edgar Mayer, Clinical Professor of Medicine, New York University Postgraduate Medical Center; Dr. Alfred S. Dooneief, Lecturer in Medicine, Columbia University College of Physicians and Surgeons; and Dr. Emil A. Naclerio, Chief, Thoracic Surgical Services, Harlem and Columbus Hospitals, New York City. This course will take place at the Park Sheraton Hotel, New York City, November 14-18, 1960.

Tuition for each five-day course will be \$100 including round table luncheon discussions.

Additional information may be obtained by writing to: Executive Director, American College of Chest Physicians, 112 East Chestnut St., Chicago 11, Ill.

POSTGRADUATE ASSEMBLY

San Diego, California

The 14th Annual Postgraduate Assembly, sponsored by the San Diego County General Hospital will be held on Wednesday, November 2, and Thursday, November 3, 1960, at the County Hospital. Guest speakers will be:

Chest Section: J. Maxwell Chamberlain, M.D.

Medicine: E. Gray Diamond, M.D.

Obstetrics-Gynecology: John C. Ullery, M.D.

Orthopedics: Andrew Bassett, M.D.

Pediatrics: Robert Ward, M.D.

Surgery: Harris B. Shumacker, Jr., M.D.

Urology: Eugene R. Poutasse, M.D.

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October 21 and 22, 1960

Texas Medical Center, Houston

Charles Heidelberger, Ph.D.

American Cancer Society

Professor of Oncology

*McArdle Memorial Laboratory for Cancer
Research*

The University of Wisconsin Medical School

Roy Hertz, Ph.D., M.D., M.P.H.

Chief, Endocrinology Branch

National Cancer Institute

Public Health Service

*Department of Health, Education
and Welfare*

Henry S. Kaplan, M.D.

Executive, Department of Radiology

Stanford University School of Medicine

Stanford Medical Center

ANNOUNCEMENT FOR GENERAL PRACTITIONERS AND INTERNISTS

Applications for Charter Membership in the American Society of Diagnostic Radiology are now being received. Membership is open to GENERAL PRACTITIONERS and INTERNISTS who do or may desire to do some types of Diagnostic Radiology in their offices.

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